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ABSTRACT

This report contains the results of a study sponsored by the National Library Service for the Blind and Physically Handicapped to investigate the implications of converting its audio magazine program from flexible disk to audiocassette. Specific issues to be considered included whether or not such a conversion would represent: (1) a financial savings in any or all phases of production or delivery; (2) interruption in service to NLS/BPH talking book machine patrons during equipment transition; or (3) any kind of environmental hazard upon disposal of used cassettes. The groundwork of the study involved visits to four potential commercial producers of audiocassette magazines and preparation of numerous pro forma estimates of postage and landfill costs. The eventual recommendation was in favor of the conversion. The report provides suggestions for specifications in the cassettes' production and packaging and for the timespan over which the conversion should be incrementally implemented. It also allays many of the concerns of the NLS/BPH regarding cost (cassettes will likely save the program money if it uses disposable ones rather than ones that are returned to the NLS/BPH for degaussing and rerecording), patron inconvenience (the library reportedly has enough preexisting unassigned cassette machines for any users needing them), and the environment (the cassette are deemed non-hazardous waste). Numerous tables and figures delineate the study results. (BEW)

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ED 389 332

DRAFT REPORT

Submitted to:

THE LIBRARY OF CONGRESS
NATIONAL LIBRARY SERVICE FOR THE
BLIND AND PHYSICALLY HANDICAPPED

For:

A STUDY TO DETERMINE THE FEASIBILITY OF CONVERTING THE AUDIO MAGAZINE PROGRAM OF NLS/BPH FROM FLEXIBLE DISK TO CASSETTE FORMAT

In response to:
CONTRACT NUMBER 95CLCCT4936

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DRAFT REPORT

A STUDY TO DETERMINE THE FEASIBILITY OF CONVERTING THE AUDIO MAGAZINE PROGRAM OF NLS/BPH FROM FLEXIBLE DISK TO CASSETTE FORMAT

Contract Number 95CLCCT4936

ManTech Advanced Technology Systems

November 14, 1995

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TABLE OF CONTENTS

Page

SECTION 1 - INTRODUCTION 1-1

1.1 BACKGROUND 1-1

1.1.1 The National Library Service for the Blind and Physically Handicapped .. 1-1
1.1.2 The Magazine Program 1-2
1.1.3 The Talking Book Topics (TBT) Program 1-2
1.1.4 Audio Playback Machines 1-3
1.1.5 Industry/Technology Trends 1-3

1.2 FACTORS AFFECTING A DECISION TO CONVERT 1-5

1.2.1 Potential Cost Savings 1-5
1.2.2 Future Magazine Demand 1-5
1.2.3 Availability of Required Cassette Production Capacity 1-7
1.2.4 Availability of CBMs 1-7
1.2.5 Availability of Funding 1-9

1.3 STUDY SCOPE 1-9

1.3.1 Analyze the Feasibility of Conversion 1-10
1.3.2 Specify the General System Functionality Required 1-10
1.3.3 Develop a Time-Phased Transition Plan 1-10

1.4 STUDY METHODOLOGY USED 1-10

1.5 DRAFT REPORT FORMAT 1-11

SECTION 2 - PRESENT MAGAZINE SCENARIO 2-1

2.1 PRODUCTION/DISTRIBUTION NETWORK 2-1

2.1.1 Present Magazine Network 2-1
2.1.2 Comparative Book Network 2-2

2.2 ANNUAL PUBLICATION REQUIREMENT 2-2

2.2.1 Copies Per Title 2-2
2.2.2 Read Time and Copy Count Per Issue 2-2
2.2.3 Frequency of Issue 2-4

2.3 NLS ROLES 2-4

2.4 NETWORK LIBRARY ROLES 2-4

2.5 CMLS ROLES 2-5

2.6 NARRATION CONTRACTOR ROLES 2-5

2.7 DUPLICATOR ROLES 2-6

- 2.7.1 Time Constraints for Publication 2-6
- 2.7.2 The CMLS Interface 2-6
- 2.7.3 Duplication/Shipping Operating Modes 2-7
- 2.7.4 NLS Q.C. Interface 2-8

2.8 USPS ROLES 2-8

- 2.8.1 Present USPS Interface at the Present FD Contractor 2-8
- 2.8.2 Comparative USPS Interface at APH 2-8

SECTION 3 - CURRENT MAGAZINE COSTS 3-1

3.1 PRESENT DUPLICATION CONTRACT 3-1

- 3.1.1 General Terms 3-1
- 3.1.2 Quantities Specified on the Bid Form/Contract 3-1
- 3.1.3 Cost Responses Specified on the Bid Form/Contract 3-1

3.2 PUBLICATION COSTS 3-2

- 3.2.1 Present Costs 3-2
- 3.2.2 Analysis of Present Narration Costs 3-2
- 3.2.3 Analysis of Present Duplication/Shipping Costs 3-4

3.3 AUDIO MACHINE MAINTENANCE COSTS 3-7

3.4 CMLS COSTS 3-7

3.5 FREE MAIL COSTS 3-7

3.6 POST-PATRON DISPOSITION PRACTICES AND DISPOSAL COSTS 3-8

- 3.6.1 Disposition Practices 3-8
- 3.6.2 Disposal Costs 3-9

SECTION 4 - FUNCTIONAL DESIGN OF AUDIO CASSETTE MAGAZINE SYSTEM **4-1**

4.1 CRITIQUE OF PRESENT/POTENTIAL CASSETTE PRODUCERS 4-1

- 4.1.1 General Qualifications 4-1
- 4.1.2 Capacity Limitations 4-2
- 4.1.3 Availability of Shells, Tape and Labels 4-2

4.2 MAGAZINE CASSETTE SPECIFICATIONS 4-3

- 4.2.1 Current Specifications 4-3
- 4.2.2 New Specifications 4-3

4.3 ALTERNATIVES TO REDUCE THE NUMBER OF CASSETTES AND COPIES REQUIRED 4-3

- 4.3.1 Read Time Per Cassette 4-3
- 4.3.2 Time Compression 4-4
- 4.3.3 Titles Per Issue 4-4
- 4.3.4 Cost Reduction Potential of Alternatives 4-4
- 4.3.5 Cassette Labeling Costs 4-6

4.4 FUNCTIONAL DESIGN OF ONE-WAY AUDIO CASSETTE SYSTEM 4-7

- 4.4.1 Cassette Shell 4-7
- 4.4.2 Cassette Tape 4-8
- 4.4.3 Duplication Process 4-8
- 4.4.4 Hub Locks 4-9
- 4.4.5 Cassette Labeling 4-9
- 4.4.6 Shipping Envelope 4-9
- 4.4.7 Package Label 4-10
- 4.4.8 CMLS Interface 4-10
- 4.4.9 Packaging/Shipping Process 4-11
- 4.4.10 Undeliverable Packages 4-11

4.5 FUNCTIONAL DESIGN OF REUSABLE AUDIO CASSETTE SYSTEM 4-11

- 4.5.1 Cassette Shell 4-11
- 4.5.2 Cassette Tape 4-12
- 4.5.3 Preparation for Reuse 4-12
- 4.5.4 Duplication Process 4-12
- 4.5.5 Hub Locks 4-12
- 4.5.6 Cassette Labeling 4-13
- 4.5.7 Packing List/Address Card 4-13

  4.5.8 Shipping Envelope 4-14
  4.5.9 CMLS Interface 4-14
  4.5.10 Packaging/Shipping Process 4-14
  4.5.11 Undeliverable Packages 4-15
  4.5.12 Attrition Rate for Components 4-15

SECTION 5 - PRO FORMA MAGAZINE COSTS 5-1

5.1 DUPLICATION/SHIPPING COSTS 5-1

  5.1.1 Polling of Prospective Duplicators 5-1
  5.1.2 One-way Cassette Option 5-2
  5.1.3 Reusable Cassette Option 5-5

5.2 AUDIO MACHINE COSTS 5-7

5.3 CMLS COSTS 5-7

5.4 FREE MAIL COSTS 5-8

  5.4.1 One-way Cassette Option 5-8
  5.4.2 Reusable Cassette Option 5-8

5.5 POST-PATRON DISPOSITION PRACTICES AND DISPOSAL COSTS 5-9

  5.5.1 Disposition Practices 5-9
  5.5.2 Disposal Costs 5-10

5.6 ONE-WAY VS REUSABLE CASSETTE OPTION COMPARISONS 5-10

  5.6.1 Summary of Comparative Costs 5-10
  5.6.2 Option Recommendation 5-11

5.7 SIMPLE MICROCOMPUTER-BASED ECONOMIC MODEL 5-12

SECTION 6 - TRANSITION FEASIBILITY ANALYSIS 6-1

6.1 PRO FORMA COST INCREASE/SAVINGS FROM CONVERSION 6-1

  6.1.1 Summary of Comparative Costs 6-1

6.2 IMPACT ON THE SUPPLY OF PLAYBACK EQUIPMENT 6-2

  6.2.1 Required Availability of CBMs for Patrons Having only TBMs 6-2
  6.2.2 Present Availability of Unassigned CBMs 6-2

6.2.3 Potential Cost of Repairing Unassigned C-1s 6-3
6.2.4 Potential Cost of Utilizing Unassigned CT-1s 6-4
6.2.5 Potential Cost of Utilizing New C-1s or C-2s 6-4

6.3 OTHER FACTORS AFFECTING A DECISION TO CONVERT 6-4

6.3.1 Patron Preferences 6-4
6.3.2 Political Implications of Cassette Disposal 6-4

6.4 TRANSITION RECOMMENDATION 6-5

SECTION 7 - TRANSITION PLAN 7-1

7.1 CRITERIA FOR CHOOSING THE SEQUENCE OF TITLE CONVERSION ... 7-1

7.1.1 Need for Funding 7-1
7.1.2 Availability of Funding 7-1

7.2 STRATEGIES FOR PHASING-IN THE NEW SYSTEM 7-1

7.2.1 Present Disc Contract Duration 7-1
7.2.2 Phase-in Option #1: Convert Titles With the Least Number of Subscribers First 7-2
7.2.3 Phase-in Option #2: Publish Titles With the Greatest Number of Subscribers in Both Disc and Cassette Format 7-5
7.2.4 Phase-in Option #3: Convert Titles With the Greatest Percentage Savings First 7-7
7.2.5 Phase-in Option #4: Convert Titles Whose Narration Would be Outsourced First 7-7
7.2.6 Phase-In Option #5: Combinations of Options #1, #2, #3, and #4 7-7
7.2.7 Subsequent Phase-in Options 7-10

7.3 PROJECTED COSTS DURING TRANSITION 7-10

7.3.1 Impact of a Decline in FD Volume on Disc Costs 7-10

7.4 OTHER TRANSITION ISSUES 7-10

7.4.1 Prepare New Technical Specifications for Magazine Cassettes 7-10
7.4.2 Make Required Changes in CMLS 7-11
7.4.3 Consider Possible Changes in the Bidding and Pricing Processes 7-11
7.4.4 Communication to Patrons and Network Re Change of Media 7-11

LIST OF EXHIBITS

Exhibit 1-A CBM and TBM Demand and Availability Seven-Year Trend 1-4
Exhibit 1-B Cassette and Talking Book Readership and Circulation 1-6
Exhibit 1-C FD Magazine and TBT Subscriptions Seven-Year Trend 1-8

Exhibit 2-A Annual Magazine and TBT Publication Requirements by Copies per Year..2-3

Exhibit 3-A Summary of Present Annual Publications Costs by Title 3-3
Exhibit 3-B Narration Cost per Issue, Current and with Imputed Fixed Cost 3-5
Exhibit 3-C Annual Duplication Costs by Title in Descending Cost per Copy Order .. 3-6
Exhibit 3-D Total Annual Landfill Disposal Costs for the Flexible Discs and Packaging3-9

Exhibit 4-A Annual Cassette Production and Shipping Requirements for Six Possible Cassette Loadings 4-5
Exhibit 4-B Cost of Print/Braille Labels with Title Specific Information 4-7

Exhibit 5-A Pro Forma Duplication Costs by Prospective Vendor 5-3
Exhibit 5-B Pro Forma Duplication Costs for Magazine Program-Several Comparisons.5-4
Exhibit 5-C Duplication Economies - One-Way, Out-of-Shell versus Multiple-Use In-Shell 5-6
Exhibit 5-D Total Annual Landfill Disposal Cost for Audio Cassettes and Packaging . 5-10
Exhibit 5-E Comparative Annual Cost of One-Way and Reusable Cassette Options ... 5-11

Exhibit 6-A Comparative Annual Magazine Cost Disc Format and Cassette Format ... 6-1
Exhibit 6-B Inventory of Unassigned CBMs by Location as of 30 September 1995 ... 6-3

Exhibit 7-A Option 1 - Subscription Profile of 10 Titles with Lowest Number of .... Subscriptions 7-3
Exhibit 7-B Option 1 - Cost Profile of 10 Titles with Lowest Number of Subscriptions 7-4
Exhibit 7-C Option 2 - Subscription Profile of 10 Titles with Highest Number of .... Subscriptions 7-6
Exhibit 7-D Option 3 - Cost Profile of 10 Titles with Greatest Percentage Savings 7-8
Exhibit 7-E Cost Profile of 10 Titles with Greatest Expected Cost Savings 7-9

LIST OF APPENDICES

Appendix	**Description**
1-1	Subscription Profile of Audio Magazine Program
1-2	CBM and TBM Demand and Availability Seven-Year Trend
1-3	Cassette and Talking Book Readership and Circulation, FY88-FY94
1-4	FD Magazine and Talking Book Topics Subscriptions - Start of FY89-FY95
1-5	Analysis of Current and Pro Forma Playback Equipment Usage
2-1	Annual Magazine and TBT Workload Requirements
2-2	Annual Magazine Publication Requirements by Frequency of Issue
3-1	Summary of Present Annual Narration Costs by Title
3-2	Annual Narration Costs by Title: Current and with Imputed Fixed Cost
3-3	FD Duplication Cost Analyses
3-4	FD Duplication Cost Analyses
3-5	FD Duplication Cost Analyses
3-6	FD Duplication Cost Analyses
3-7	FD Duplication Cost Analyses
3-8	Current Playback Machine Costs for Magazine Program
3-9	Current USPS Costs for Magazine Program
3-10	Current Annual Environmental Costs in Descending Total Cost Order
3-11	Associated Environmental Issues - Flexible Discs
5-1	Pro Forma Duplication Costs for Magazine Program - By Prospective Vendor
5-2	Pro Forma Playback Machine Costs for Magazine Program
5-3	Pro Forma USPS Costs for Magazine Program
5-4	Pro Forma USPS Costs for Magazine Program - Reusable Cassette Scenario
5-5	Associated Environmental Issues - Audio Cassettes
5-6	Pro Forma Environmental Costs for Magazine Program
5-7	Pro Forma Environmental Costs for Magazine Program - Reusable Cassette Scenario
5-8	Pro Forma Duplication Costs for Magazine Program - With Title Consolidation
6-1	Analysis of Incremental Number of CBMs Required Upon Magazine Format Conversion

EXECUTIVE SUMMARY

A free national library program of braille and recorded materials for blind and physically handicapped persons is administered by the National Library Service for the Blind and Physically Handicapped (NLS/BPH), Library of Congress. With the cooperation of authors and publishers who grant permission to use copyrighted works, NLS selects and produces full-length books and magazines in braille and on recorded disc and cassette. ManTech Advanced Technology Systems Inc. (ManTech) was tasked by the NLS to perform a study to determine the feasibility of converting the audio magazine program from a flexible disk (FD) format to an audio cassette format, to make recommendations as to whether the conversion should be implemented, and if so, how and when.

Forty-three magazines are currently published by the sole-source FD magazine contractor, who reproduces, packs and ships the products directly to patrons of the program under the auspices of the United States Postal Service (USPS) Free Matter for the Blind and Handicapped provision. The magazines are read by approximately 52,100 patrons, with the average number of subscriptions being 3.3. There are 681 issues per year published among the 43 titles, ranging from weekly to quarterly issue frequency. A total of approximately 3,010,000 copies per year are manufactured and distributed by the FD magazine contractor. In addition to the 43 magazines, there is also produced on FD and audio cassette a book catalog called Talking Book Topics; the FD magazine contractor produces approximately 56,000 FD copies per issue (six issues per year), and the audio cassette contractor approximately 100,000 copies per issue. The magazines are one-way, disposable products, i.e. they are not returned for storage in collections and re-circulation, as are books in the program.

The FD magazines are played on specially designed phonograph machines called Talking Book Machines (TBM), and the cassettes on specially designed cassette players called Cassette Book Machines (CBM). The machines are manufactured by NLS contractors and distributed to the network of cooperating libraries associated with the program who then lend the machines to patrons. Recent trends in recorded book readership and circulation exhibit a growing number of cassette book readers and CBM usage, and a declining number of talking book readers and TBM usage. It is estimated that FD magazine and TBT-FD reading constitute 56% of current TBM usage, and TBT-cassette reading constitutes 1.2% of current CBM usage.

In addition to the estimation of expected manufacturing and shipping costs for a *pro forma* audio cassette magazine program and specifying general system functionality, ManTech was also tasked with assessing the incremental impact of such a magazine format conversion on playback machine operations (start-up requirements, repairs, and depreciation of equipment), impacts on USPS Free-Matter magazine delivery (and return) costs, and environmental costs and considerations of using both types of media. ManTech was essentially instructed by the NLS neither to focus upon nor assess the impacts upon the NLS (with the exception of the costs of magazine manufacturing and machine repair and manufacturing needs), network libraries (who enroll, modify and disenroll patron magazine subscriptions), the Comprehensive Mailing List System (CMLS) contractor (who maintains the magazine subscription database and generates the mailing lists for the magazine manufacturer's use), and the narration contractor (who translates printed magazines into audio format for use by the duplication contractors). The future roles and costs of these four entities, with exceptions noted, are assumed to be the same or very similar under any future production scenario.

The study methodology essentially consisted of: attending an initial orientation session and briefing with the NLS, and meeting with a study Advisory Committee in order to fully understand the study objectives, prioritize the work to be done, and set overall direction; performing site visits to the current FD magazine producer (also a potential future cassette magazine producer) and additionally three other firms who would be potential future cassette magazine producers, in order to examine current FD magazine and cassette production operations and obtain production procedural and financial information; preparing a generic statement of magazine publication requirements in order to unambiguously quantify the work to be performed; analyzing current FD duplication and shipping costs in order to provide the baseline for cost comparisons with potential future operations; preparing a generic, *pro forma* statement of cassette magazine production requirements to serve as the baseline workload for any future cassette magazine operations; developing the functional design of an audio cassette magazine system to serve as the basis for the NLS to use in the development of specifications for cassette magazine production in the event of implementation; estimating *pro forma* costs for cassette magazine duplication and shipping, USPS Free Matter deliveries and returns, audio playback machine incremental needs, repairs, and depletion, and post-patron product disposition; evaluating both the economic and operational feasibility of conversion of magazine format; recommending whether conversion should occur, and if so to what extent; and, developing several conversion strategies if the recommendation was made to convert the program in total or in part.

The present annual cost of FD magazine operations was determined to be approximately as follows: $809,000 for narration (additional $6,300 for TBT); $2,075,000 for duplication and shipping (additional $566,000 for TBT in both formats); $885,000 for machine repairs and depreciation (additional $247,000 for TBT in both formats); $2,435,000 for USPS deliveries and returns (additional $697,000 for TBT in both formats); and, $8,707 for post-patron disposal (additional $2,900 for TBT in both formats). As stated above, NLS costs other than manufacturing magazines and repairing/manufacturing machines, network library costs, and CMLS costs were not examined and were assumed to be essentially unchanged under any future operation implemented. Current FD duplication costs were found to have a relatively high fixed cost of production, but a relatively low variable cost. The Mean Time Between Repairs (MTBF) were found to be slightly greater, the Mean Time to Repair (MTTR) slightly lower, and the average lifetime slightly longer for TBMs than for CBMs, respectively. First-class delivery rates, current in October, 1995, were used to price the services rendered by the USPS. The current national average landfill cost was used to price the post-patron disposal costs; a laboratory analysis of FD magazine discs and packaging materials yielded the conclusion that no product constituent is considered hazardous waste *vis-a-vis* EPA criteria, and no special disposal requirements are warranted.

The functional design of the pro forma cassette magazine operations were developed based upon information collected during the four site visits and several meetings with NLS Engineering and Quality Control personnel. It is noted that none of the potential vendors who responded to cost estimate requests (three of the four visited) expressed reservations about production capacity limitations which might constrain production to something less than the *pro forma* requirements (as long as they were given a minimum of eight months to "ramp-up" their operations) and that there were no concerns about the availability of raw materials required for the production process, with the exception of print-braille labels (although two of the vendors produce their own labels, and did not express a concern about this, while the vendor who obtains them from an outside supplier did). The print-braille label manufacturer was contacted in this regard, and stated that given greater than one year, but less than two years, the firm could develop the capacity to produce all the labels necessary.

Because there is no existing specification for cassette magazine duplication (there is for labeling and packaging), NLS must develop one for any implementation envisioned. Such specifications should address cassette magazines as an all-new audio medium, with no established precedents. We also recommend that the input of potential vendors be solicited when preparing the specifications. Specific areas for consideration should include maximum read-time (cassette load) per cassette (if 400 minutes instead of 360 minutes, cost savings will be realized in reproduction, labeling, and shipping), the use of time compression for specific titles or applied universally (savings in reproduction, labeling and shipping), the possible combination of two titles on one cassette if found to be economically viable (savings in reproduction and shipping), and the marginal utility of print-braille labeling versus its cost (19% of duplication and shipping).

The functional design of a one-way, disposable, out-of-shell duplication audio cassette magazine operation will consist of: a standard sonic welded or screw case shell that is less expensive than the type used for book cassettes, with a color other than white to distinguish it from book cassettes; a tactile differentiation from cassette books, either via the shell or the label; a voice-grade tape identical to that now used for cassette books; the tape will be cut-to-length, i.e. variable length, with a maximum 400 minute load; the narrator will provide a two-track analog master to the duplicator, as is currently the case, and the duplicator will use a slave-driven, bin loop, out-of-shell duplication process to produce the 4-track, 15/16 ips analog product currently used for books...the duplicators will have the discretion of using an analog or digital bin-loop reproduction process as they see fit; hub locks will not be used in the shipping process; the print-braille label, if used, will either be smaller than that used for cassette books, or will include a feature or symbol that tactually differentiates the magazine from a book; there will be no marking on the shell to indicate that the item is government property; the shipping envelope will not include braille on the label; the shipping envelope will consist of either a 32-pound Kraft top-opening envelope, or a corrugated sandwich pack envelope, with the same information as that now contained on FD magazines; the CMLS label will either be provided in Cheshire format, as is currently done, in a 1-up pressure sensitive format enabling the packaging and labeling processes to be fully integrated, or in machine-readable format for use with automated in-line package printing...whichever format the duplication contractor specifies; the CMLS listing will be provided in the sort that the duplicator specifies; and, all packages will continue to have the CMLS contractor as the return address.

The functional design of a multi-use, returnable, in-shell duplication audio cassette magazine operation will have the features listed in the preceding paragraph with the following exceptions: all tapes will be cut to standard, not variable, length, e.g. 360 or 400 minutes; patrons will return cassettes to the magazine manufacturer rather than disposing of them (it was estimated that 80% of the cassettes that reach patrons would be returned); returned tapes will be degaussed and reused by the duplicator on average three times; returned envelopes will be reused on average two times; an in-shell duplication process will be used...new cassettes will either be loaded by the manufacturer or purchased from suppliers pre-loaded; the label on the cassette will not be title-specific, but may or may not contain braille; a packing list-contents card, containing both print and braille with title-specific information, will be enclosed in each package, and will have one corner cut or punched; the envelope will be an end-opening, clasp closure, window envelope that will enable patrons to return the cassettes to the manufacturer; the CMLS contractor will provide contents-address cards rather than package labels, and these will be sorted in the manner specified by the duplicator.

Cost estimates for cassette magazine production were received from three of the four firms visited in site visits, whereby quotes were provided for several titles and the results extrapolated via regression and correlation analysis to all 43 titles. The *pro forma* annual cost of cassette magazine operations was determined to be approximately as follows: $2,200,000 for duplication and shipping (additional $667,000 for TBT); $944,000 for machine repairs and depreciation (additional $252,000 for TBT); $1,804,000 for USPS deliveries and returns (additional $697,000 for TBT); and, $4,600 for post-patron disposal (additional $2,900 for TBT). As previously stated, NLS costs other than manufacturing magazines and repairing/manufacturing machines, narration contractor costs, network library costs, and CMLS costs were not projected and were assumed to be unchanged under any future operation implemented. The minimum duplication cost scenario would be to retain approximately half of the titles in FD and convert half to cassette (Ref. Exhibit 5-B) and award to the lowest bidder on a title-by-title basis, which would be approximately $1,862,000 per year versus present costs of $2,075,000. An all-cassette production scenario using the same award strategy is estimated to cost $2,057,000 per year. The aforementioned scenarios using the average cassette duplication costs of the three responding vendors yields $1,997,000 per year and $2,366,000, respectively. The average of the "individual vendor" ($2,057,000) and "averaged vendor" ($2,366,000) values is recommended as the most robust figure to use for planning purposes, which is approximately $2,200,000 per year, which is $125,000 greater than present total FD duplication annual costs. Considering USPS, playback machine, and environmental costs as well, the cassette magazine scenario is estimated to be $454,000 less expensive that the present FD operations.

Cost estimates for the multi-use, returnable, in-shell duplication scenario were received from only one vendor. An analysis was made of this approach, and the duplication costs were found to be significantly unfavorable (approximately 40%-50% higher than the one-way, disposable approach). Given incremental USPS costs of $1,750,000 to return the magazines and TBT to the duplicators, and the inferior quality of the product (in which all vendors concurred), we strongly recommend against the implementation of the multi-use, in-shell duplication, returnable option and strongly recommend the implementation of the one-way, disposal, out-of-shell duplication option for any future cassette magazine implementation.

A separate analysis was also made to determine the number of CBMs that would be required to be provided to those FD magazine and FD TBT patrons who currently only have TBMs. The number of machines required is estimated at 4,150 and 4,750, respectively, for a total of approximately 8,900 additional cassette playing machines. Given a September 30, 1995 national inventory of over 80,000 unassigned cassette playing machines, this requirement does not *per se* present a problem. Assuming that the current NLS commercial repair contractor would be required to bring this number of machines out of an "in-repair" and into an "available" status, this first-time cost is estimated at approximately $400,000...conservative, because some, albeit not all, network libraries would be able to readily furnish this incremental requirement from current inventories.

Although no survey was conducted, there is ample anecdotal evidence to conclude that the majority of patrons nationwide would prefer a cassette to an FD format for magazines, and we conclude that the patron preference for conversion will be highly favorable, and that demand will increase by approximately 25% in a relatively short period of time after conversion, but only slowly after that.

The political ramifications of disposal of approximately 4,000,000 cassettes per year was cited as a concern by the NLS, but given the widely dispersed, both geographically and temporally, nature of this disposal, we conclude that there is no cause for concern. In essence, they will become part of the household waste stream, and there will furthermore be no government identification upon the products. We must recommend against return of the cassettes by patrons for centralized recycling for three reasons, the first being by far the most important: 1) it will cost the USPS approximately $1,750,000 per year (the same cost as returns for the reusable scenario) to bring the products back for recycling, and environmentally speaking, involves the burning of fossil fuels for transportation, processing equipment operations, etc., which more than offset environmental "savings" from recycling; 2) the waste is not hazardous if disposed of in a landfill, by any of the EPA criteria; and, 3) the NLS would have to pay a third-party to separate the cassettes from the mailing containers before any recyclers would be willing to accept the products for recycling.

We recommend that the NLS convert the magazine program to a one-way, disposable, out-of-shell duplicated, cut-to-length cassette product. The marginal utility to be gained from this change will more than outweigh the very slight additional cost, if any, of producing and shipping in cassette format. We recommend that the program be converted in entirety, but not all 43 titles in one year's time, and by using two or possibly three vendors for production, not one; this will simultaneously satisfy NLS's desire to end sole-source reliance on a single producer, and alleviate concerns about production capacity constraints. The incremental load placed upon the playback machine operations will not be significant, and concerns in this regard, we believe, are indicative of the overall situation faced by NLS and the network *vis-a-vis* machine repair and inventory control functions.

Procurement recommendations offered include unbundling the narration from duplication solicitations, enabling duplication offerors to bid upon groups of titles as well as on a title-by-title basis, and requiring both narration and duplication contractors to bid fixed and variable costs by title.

Specific phase-in options include first converting the 10 titles with the fewest subscriptions, the 10 titles with the most subscriptions, the 10 titles with the greatest expected savings percentage, and the 10 titles with the greatest expected dollar savings. Any implementation option would require notification to patrons either via the NLS, which could use CMLS for this purpose, or via the network libraries after receiving conversion protocol information from the NLS.

Section 1

INTRODUCTION

1.1 BACKGROUND

1.1.1 The National Library Service for the Blind and Physically Handicapped

A free national library program of braille and recorded materials for blind and physically handicapped persons is administered by the National Library Service for the Blind and Physically Handicapped (NLS), Library of Congress (LOC). With the cooperation of authors and publishers who grant permission to use copyrighted works, NLS selects and produces full-length books and magazines in braille and on recorded disc and cassette.

Books are distributed to a cooperating network of over 140 regional and subregional (local) libraries where they are circulated to eligible borrowers. Magazines are sent directly from producers to readers. Reading materials (books and magazines) and playback machines are sent to over 400,000 borrowers by postage-free mail.

Established by an act of Congress in 1931 to serve blind adults, the program was expanded in 1952 to include children, in 1962 to provide music materials, and again in 1966 to include individuals with other physical impairments that prevent the reading of standard print.

The NLS program is funded annually by Congress. The fiscal year 1995 appropriation for NLS is $42,713,000. Regional and subregional libraries receive funding from state, local and federal sources. Through an additional appropriation to the U.S. Postal Service, books and materials are mailed as "Free Matter for the Blind and Handicapped." The combined annual expenditure for the program is approximately $120,000,000.

1.1.2 The Magazine Program

Forty-three magazines are now published by the NLS, including four foreign language, four music and two childrens magazines. These magazines are read by 52,100 patrons, and the average number of subscriptions per patron is 3.3. There are 681 issues and 3,010,000 copies published per year, and the weighted average number of copies per issue is 4,420.

Each issue is duplicated on 2-sided vinyl flexible discs (FDs). The number of discs per copy ranges from one to eight, and the (weighted) average is 2.7. One copy of each issue is sent directly to subscribers by the disc duplication contractor, via free mail, using mailing lists provided by the Comprehensive Mailing List System (CMLS) contractor. Each shipment consists of a single copy, and subscribers who need more than one copy, such as institutions, are sent duplicate shipments.

1.1.3 The Talking Book Topics (TBT) Program

TBT is a book catalog published for use by those cassette and disc book readers who are TBT subscribers. Annual volume is 6 issues and 936,000 copies.

The catalog is published in large print, FD, and recorded cassette (RC) format. There are two discs per copy and 57,000 FD copies per issue, including 10,000 copies that are bulk shipped to the contractor for the Braille Book Review (BBR) catalog. There is one cassette per copy and approximately 94,000 cassette copies per issue.

One copy of each issue is sent directly to subscribers by either the disc contractor or the cassette contractor, via free mail, using mailing lists provided by the CMLS contractor. Each shipment includes a pre-labeled book order form that the patron can fill out and return to their Regional Library (RL). Appendix 1-1 contains a frequency distribution of the current FD magazine and TBT subscription profiles.

1.1.4 Audio Playback Machines

Cassettes are manufactured in 4-track monaural format and play at 15/16 inches per second. Flexible discs are 9" in diameter and play at 8 1/3 RPM. The NLS contracts for the manufacture of Cassette Book Machines (CBMs) and Talking Book (Disc) Machines (TBMs) that play these cassettes and records, respectively, and lends the machines to qualified patrons through the RL distribution system. The machines are kept in repair by the RLs and their associated volunteers.

Trends in TBM and CBM demand and availability over the past six years are depicted in Exhibit 1-A, with supporting statistics contained in Appendix 1-2. Total audio machine demand has risen only 2% in this period. But demand for CBMs has increased 25% while demand for TBMs has declined 42%. During the same time span, CBM availability has decreased 37% and TBM availability has decreased 28%.

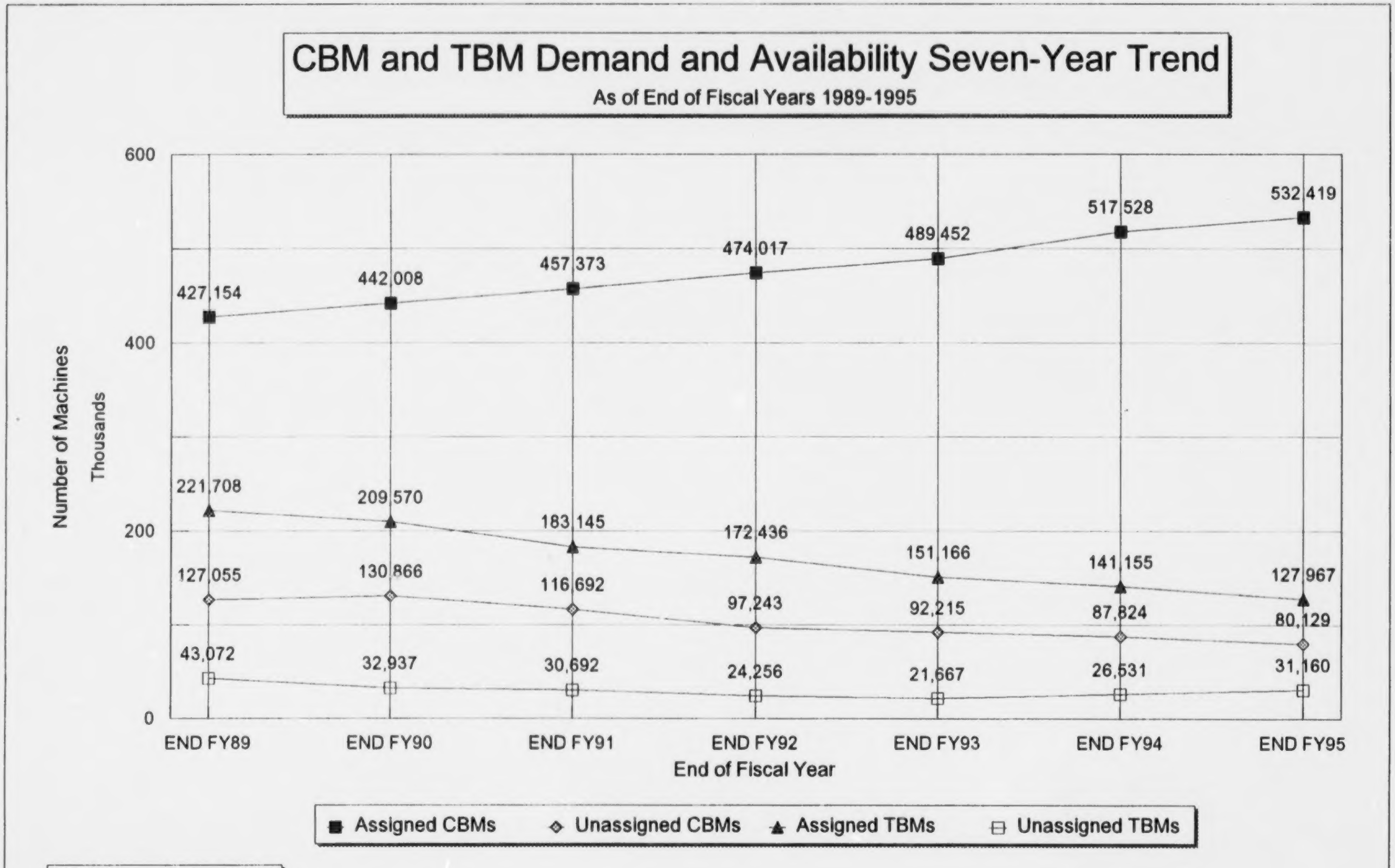
The RLs and other organizations, including magazine and book publishers, now produce and distribute cassettes that are played on NLS machines. Similarly, at least one other source also provides readers with specially designed playback machines, and some NLS materials are played on this equipment.

1.1.5 Industry/Technology Trends

Phonograph (disc) records, as a medium, is being phased out in favor of cassette tape and CD, and other publishers of disc books and magazines have already converted to cassettes.

As a result, there is now only one FD producer left. With only one producer, there is no possible disaster contingency plan (alternative source), and no frame of reference for making comparisons of quoted copy costs.

Exhibit 1-A



Data Source - MMR Reports

While the CBM reader base has been increasing, the TBM reader base has been declining, as shown in Exhibit 1-B with supporting statistics in Appendix 1-3, now that new disc book offerings by the NLS are minimal. As a result, TBM demand has been largely sustained by the magazine program in recent years. Approximately 44% of FY94 TBM usage was for books and 56% was for magazines. Many readers now use their TBMs only for magazines.

1.2 FACTORS AFFECTING A DECISION TO CONVERT

1.2.1 Potential Cost Savings

Production costs of cassettes have declined significantly over recent years, and are much closer to FD costs than in the past. RC costs for some magazines now appear to be potentially equal to or lower than FD costs.

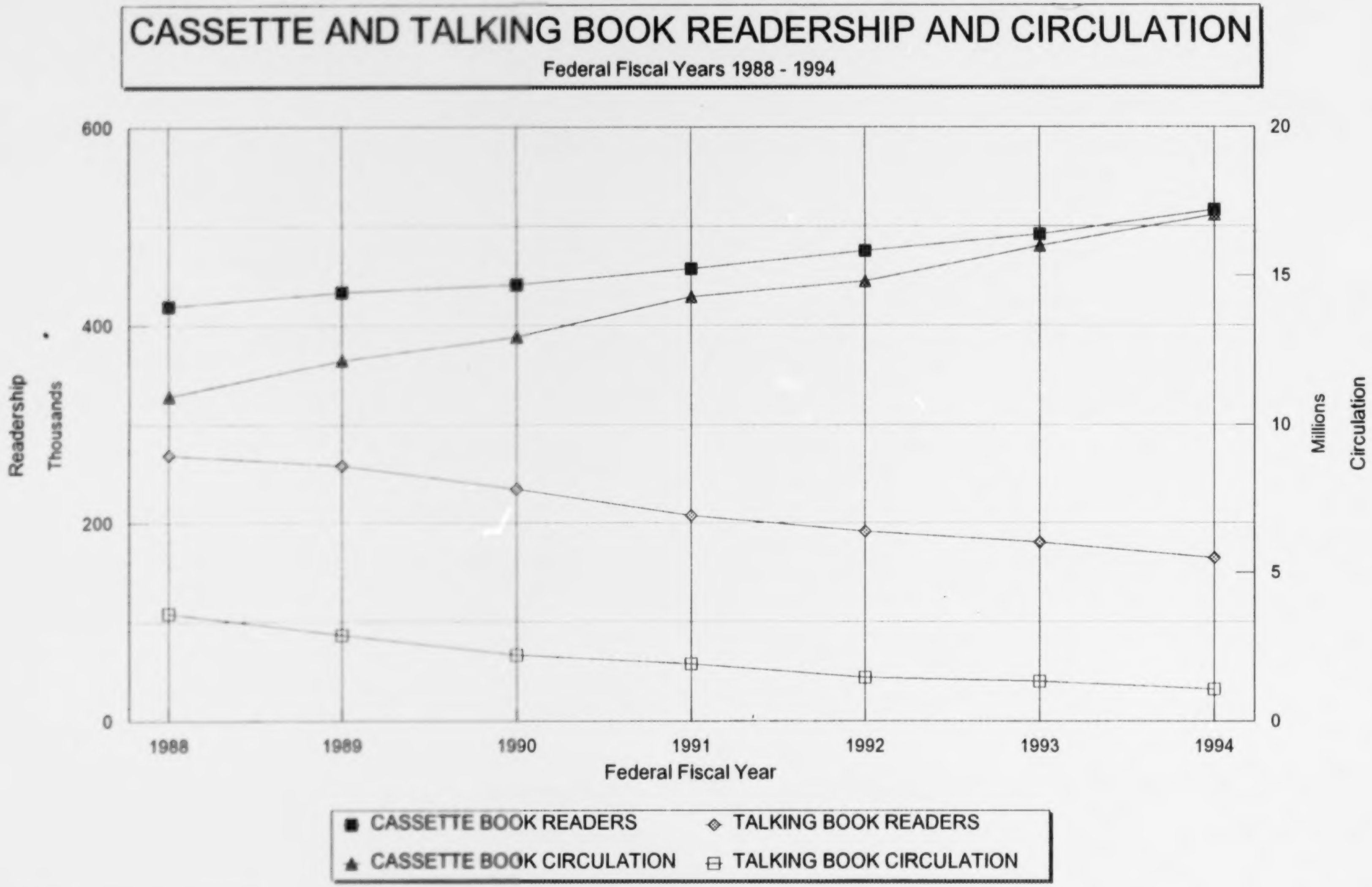
Production economies will ensue from developing functional specifications for magazine cassettes that are tailored to one-time reader use, or possible reuse three-to-four times, rather than replicating the book cassette specifications.

Production economies will also be realized by making the cassette labeling, packaging and shipping design requirement much more amenable to automation.

1.2.2 Future Magazine Demand

While the demand for magazines will likely increase after conversion to cassette format, present disc demand is to be used for planning purposes in this feasibility study. Potential demand increases can then be addressed as a "what if" scenario with use of the microcomputer model to be furnished to NLS.

Exhibit 1-B



Data Source: Network Libraries

A TBT cassette pilot catalog was begun in 1987, and the dual issue program was formalized in 1990. In the first year of conversion, overall TBT demand increased 19% (Exhibit 1-C, with supporting statistics in Appendix 1-4).

American Printing House for the Blind (APH), a Louisville, Kentucky-based cassette book producer and former disc producer, experienced a 25% increase in demand when Newsweek and Reader's Digest magazines were converted from disc to cassette. APH produces these magazines independently of NLS and maintains their own subscriber mailing lists.

A 34% increase in the number of NLS magazine subscriptions would restore magazine demand to 1989 levels, as shown in Exhibit 1-C. While ostensibly a favorable development for the NLS, such an increase could cause budgetary problems. The prospect of increased magazine demand must therefore be factored into any conversion strategies that may be developed.

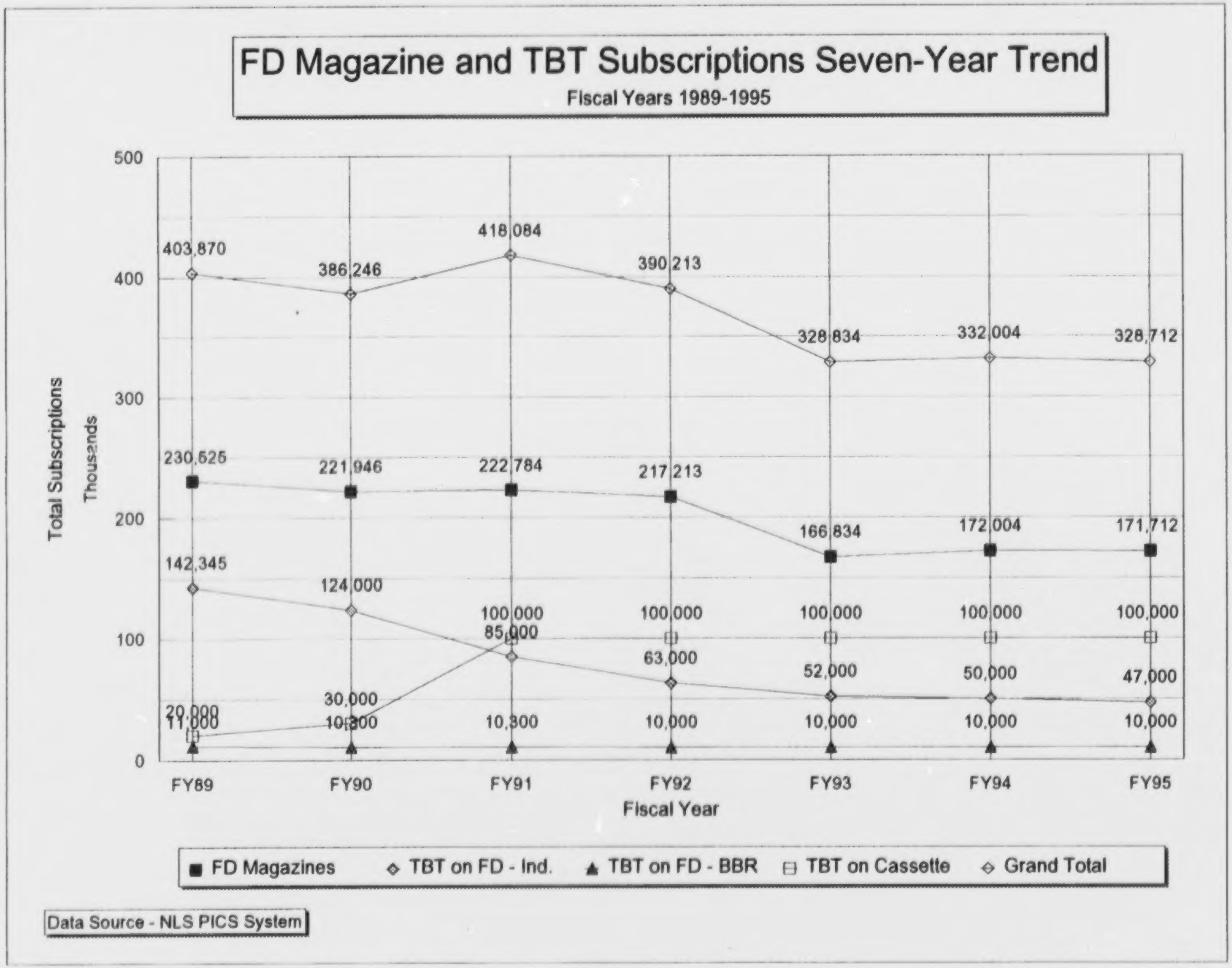
1.2.3 Availability of Required Cassette Production Capacity

The duplication capacity needed for full FD conversion to cassette format is some 4,000,000 cassettes per year, approximately 44% of which will be for magazines that are published weekly. Adequate supplies of shells, tape, and labels will also be needed by the duplicators.

1.2.4 Availability of CBMs

There is discernable long-term decline in the number of unassigned CBMs (Exhibit 1-A). This decline can be attributed to a combination of growth in the CB readership and a decision to terminate some of the oldest machines, regardless of their condition. As of 30 September 1995 there were 80,130 unassigned CBMs in the network (including CT-1s).

Exhibit I-C



FD Magazine and TBT Subscriptions Seven-Year Trend

Fiscal Years 1989-1995

Data Source - NLS PICS System

The primary NLS need for CBMs is to provide either new or repaired machines to cassette book readers. Present machine inventories are more than adequate for this purpose, if repairs are promptly made.

The formative CBM need for the magazine program is for those magazine readers who now have only TBMs. However, most magazine readers now have both CBMs and TBMs. We estimate that only 4,150 new or repaired CBMs will therefore be needed for full conversion of magazines to cassette format (this analysis is presented later in the report). An additional 4,850 CBMs would be needed for full conversion of the TBT catalog to cassette format.

There would be some additional read time wear on CBMs after a conversion to cassette format. This additional machine usage is estimated to be 8%, and its calculation is shown in Appendix 1-5.

1.2.5 Availability of Funding

The availability of funding for start-up will impact both transition plan timing and strategy, as these funds would be needed well in advance of any savings that could or could not accrue from conversion. Monies will be needed for planning and executing the conversion protocol, making the necessary CBMs available, changes in the CMLS logic and data base, and possibly subsidizing some titles whose conversion to cassette does not prove to be cost-effective.

1.3 STUDY SCOPE

The scope of work is to conduct a feasibility study and make recommendations on whether the NLS/BPH audio magazine program should transition from its current flexible disc format to an audio cassette format, and if so, when and how. Accordingly, three major planning tasks were performed.

1.3.1 Analyze the Feasibility of Conversion

Analyze the technical, operational, and economic feasibility of converting the current audio magazine program from flexible disc (FD) to recorded cassette (RC) format, and recommend whether the NLS should make such a transition.

1.3.2 Specify the General System Functionality Required

If recommending conversion to the RC format, specify the general system functionality of a design for the duplication, packaging, shipping and disposal of cassettes that will achieve the established project objectives. This project being a feasibility rather than implementation study, detailed specifications were not developed, but general system functional descriptions were developed.

1.3.3 Develop a Time-Phased Transition Plan

If recommending adoption of the RC format, develop a transition plan detailing how the magazine program could best convert from the old format to the new.

1.4 STUDY METHODOLOGY USED

- Attend NLS Briefing and Initial Advisory Committee Meeting
- Make Site Visits to Present/Potential Cassette Suppliers
- Prepare Generic Statement of Annual Magazine Publication Requirements
- Model Present Disc Costs
- Prepare Pro Forma Statement of Annual Cassette Requirements
- Develop the Functional Design of An Audio Cassette Magazine System
- Model Pro Forma Cassette Costs
- Evaluate the Operational and Economic Feasibility of Conversion

- Make Yes/No Recommendation to Convert from FD to RC Format.
- Develop a Time Phased Transition Plan for Conversion If the Recommendation Is Yes.

1.5 DRAFT REPORT FORMAT

The basic format of the draft study report was first developed by ManTech, and an outline submitted to NLS for comments and suggestions. With these comments incorporated into the outline, the report format is structured as described below.

- Section 2 contains a narrative discussion of the present magazine production/ distribution network, the annual magazine publication requirement, and the roles of the various participants in the magazine program.
- Section 3 quantifies the present costs of the magazine program, and describes present post-patron disposition practices for discs and packaging materials.
- Section 4 defines the functional design requirements of an audio cassette magazine system that can be used in costing-out the project economics.
- Section 5 quantifies the *pro forma* costs of the magazine program, assuming full conversion to cassette format, and describes the proposed post-patron disposition practices for cassettes and packaging materials.
- Section 6 analyzes the operational and economic feasibility of transitioning the magazine program from disc to cassette format.
- Section 7 presents a selection of viable strategies for transitioning to cassette format, and discusses their comparative economics and strategic merit.

Section 2

PRESENT MAGAZINE SCENARIO

2.1 PRODUCTION/DISTRIBUTION NETWORK

2.1.1 Present Magazine Network

The NLS is committed to maintaining the current pattern, whereby magazines are centrally manufactured and mailed directly to subscribers by the producers. The major players in this system are:

- the NLS, who selects the titles to be produced, contracts with firms to manufacture the magazines, and monitors the products being provided;

- the network libraries, who enroll patrons in the program, manage and update patron subscription files as necessary, and remove patrons from the program as required;

- the narration contractor, who transfers the magazines from printed to audio format, and is a subcontractor to the duplicator in the present scenario;

- the duplicator, who manufactures and ships the magazines to patrons nationwide;

- the CMLS contractor, who manages and maintains the database that is the source of subscription data for the program, and generates mailing labels for the duplicator; and,

- the United States Postal Service, who transports the magazines from the manufacturer to patrons nationwide.

In the present scenario, the magazines and TBT are one-way, disposable products; i.e. there is no expectation of their return, and they are not on-loan to patrons.

Appendix 2-1 provides a concise but comprehensive summary of the workload generated by the current system.

2.1.2 Comparative Book Network

In contrast to the magazine program, the present book program has the following major characteristics, whereby:

- New book titles are duplicated by producers and sent to the network libraries for distribution.
- Additional copies are duplicated by the network libraries, if and as required.
- The network libraries receive book orders directly from patrons.
- Patrons return books to the network libraries, the books are stored in permanent collections, and the books are recirculated.

2.2 ANNUAL PUBLICATION REQUIREMENT

2.2.1 Copies Per Title

Annual magazine and TBT publication requirements are presented in Exhibit 2-A, and the 43 published magazines are listed by number of copies per year in descending order. These copy counts are a derivative of both the number of subscribers per title and the frequency of publication of the titles. As noted, five titles represent 50% of all copies produced. The present and pro forma costs of publishing these titles are therefore critical to the project economics.

2.2.2 Read Time and Copy Count Per Issue

These two parameters best define the publishing requirement. Read time per issue ranges from 60 to 850 minutes, and the weighted average is 275 minutes. Copies per issue range from 300 to 14,650, and the weighted average is 4,420 copies.

Exhibit 2-A

ANNUAL MAGAZINE AND TBT PUBLICATION REQUIREMENTS BY COPIES PER YEAR

10/29/95,03:48 PM

1	2	3	4	5	6	7	8	9	10
MAGAZINE TITLE	Issues per Year	Required Response Time Working Days	Required Response Time Calendar Days	Average Minutes Per Issue	Average Minutes Per Year	Average Copies Per Issue	Average Copies Per Year	Percent of Copies Per Year	Cummulative Percent of Copies Per Year
US NEWS AND WORLD REPORT	50	5	7	240	12,000	12,500	625,000	20.8%	20.8%
SPORTS ILLUSTRATED	53	4	7	179	9,487	5,832	309,096	10.3%	31.0%
NEW YORK TIMES	52	4	7	112	5,824	4,515	234,780	7.8%	38.8%
NATIONAL GEOGRAPHIC	12	10	14	213	2,556	14,648	175,776	5.8%	44.7%
GOOD HOUSEKEEPING	12	11	21	554	6,648	13,758	165,096	5.5%	50.2%
ELLERY QUEENS MYSTERY MAGAZINE	13	11	21	392	5,096	9,401	122,213	4.1%	54.2%
PREVENTION	12	10	14	207	2,484	10,125	121,500	4.0%	58.3%
CONSUMER REPORTS	12	10	14	488	5,856	8,224	98,688	3.3%	61.5%
BOOK WORLD	52	4	7	149	7,748	1,674	87,048	2.9%	64.4%
MONEY	15	10	14	522	7,830	5,618	84,270	2.8%	67.2%
KIPLINGER'S PERSONAL FINANCE MAGAZINE	12	11	21	404	4,848	6,414	76,968	2.6%	69.8%
NATION	47	4	7	174	8,178	1,394	65,518	2.2%	72.0%
MAGAZINE OF THE MONTH	12	15	21	337	4,044	5,314	63,768	2.1%	74.1%
TRUE WEST	12	10	14	171	2,052	5,157	61,884	2.1%	76.1%
NATIONAL REVIEW	25	10	14	305	7,625	2,454	61,350	2.0%	78.2%
ATLANTIC MONTHLY	12	10	14	358	4,296	3,664	43,968	1.5%	79.6%
AMERICAN HERITAGE	8	10	14	312	2,496	5,261	42,088	1.4%	81.0%
NATURAL HISTORY	12	10	14	215	2,580	3,469	41,628	1.4%	82.4%
OUTDOOR LIFE	12	10	14	370	4,440	3,407	40,884	1.4%	83.8%
ANALOG	13	10	14	568	7,384	3,074	39,962	1.3%	85.1%
NEW CHOICES	10	10	14	237	2,370	3,967	39,670	1.3%	86.4%
HARPERS	12	10	14	302	3,624	3,197	38,364	1.3%	87.7%
CHILDRENS MAGAZINE PROGRAM	12	10	14	72	864	3,153	37,836	1.3%	89.0%
EBONY	12	10	14	208	2,496	3,092	37,104	1.2%	90.2%
NATIONAL GEOGRAPHIC WORLD	12	10	14	59	708	2,842	34,104	1.1%	91.3%
TRAVEL/HOLIDAY	10	10	14	249	2,490	3,223	32,230	1.1%	92.4%
FARM JOURNAL	13	10	14	253	3,289	1,929	25,077	0.8%	93.2%
STEREO REVIEW	12	10	14	391	4,692	1,972	23,664	0.8%	94.0%
WRITER	12	10	14	241	2,892	1,954	23,448	0.8%	94.8%
ENCORE	12	10	14	523	6,276	1,828	21,936	0.7%	95.5%
QST	12	20	28	693	8,316	1,697	20,364	0.7%	96.2%
FOREIGN AFFAIRS	7	15	21	447	3,129	2,406	16,842	0.6%	96.8%
SELECCIONES DEL READERS DIGEST	12	15	21	448	5,376	1,131	13,572	0.5%	97.2%
CIVILIZATION	6	10	14	346	2,076	2,000	12,000	0.4%	97.6%
CONTEMPORARY SOUNDTRACK	6	22	28	177	1,062	1,862	11,172	0.4%	98.0%
HISTORIC PRESERVATION	6	10	14	293	1,758	1,704	10,224	0.3%	98.3%
QUARTERLY MUSIC MAGAZINE	4	22	28	418	1,672	2,542	10,168	0.3%	98.7%
BUENHOGAR	12	15	21	274	3,288	737	8,844	0.3%	99.0%
JOURNAL OF COUNSELING & DEV.	6	10	14	849	5,094	1,390	8,340	0.3%	99.2%
SOCIAL WORK	6	10	14	668	4,008	1,239	7,434	0.2%	99.5%
JOURNAL FRANCAIS D'AMERIQUE	23	15	21	139	3,197	296	6,808	0.2%	99.7%
MUSICAL MAINSTREAM	4	22	28	165	660	1,350	5,400	0.2%	99.9%
BESTE AUS READERS DIGEST	12	10	14	307	3,684	298	3,576	0.1%	100.0%
TOTAL MAGAZINES - FD	681				186,493	171,712	3,009,662	100.0%	100.0%
WEIGHTED AVERAGE PER ISSUE				274		4,419			
TALKING BOOK TOPICS-FD-IND, DISC	6	35	42	240	1,440	46,000	276,000	7.0%	
TALKING BOOK TOPICS-FD-BULK (BBR)	6	35	42	240	1,440	10,000	60,000	1.5%	
TALKING BOOK TOPICS-FD	6	35	42	240	1,440	56,000	336,000	8.5%	
TALKING BOOK TOPICS-CASSETTE, CASS.	6	35	42	240	1,440	100,000	600,000	15.2%	
TALKING BOOK TOPICS-TOTAL	6	35	42	240	1,440	156,000	936,000	23.7%	
GRAND TOTAL	687				187,933	327,712	3,945,662		
WEIGHTED AVERAGE PER ISSUE				274		5,743			

BEST COPY AVAILABLE

2.2.3 Frequency of Issue

Appendix 2-2 arrays the annual publication requirement by frequency of issue. Five titles are issued weekly, two bi-weekly, 27 monthly, seven semi-annually, and two quarterly. The five weekly titles represent 44% of all copies produced, and have a required publication response time of seven calendar days. This response time is measured from the day that a printed copy is obtained by the narrator to the day that duplicated copies are shipped to patrons.

2.3 NLS ROLES

The NLS selects the title offerings for the magazine program. These have not changed appreciably in the last six years, and are now under review. The NLS also contracts for the production of the magazines with outside firms, and ensures that a quality product is delivered in a timely manner. The NLS contracts with and monitors the performance of the CMLS contractor. With regard to the relationship with network libraries and the USPS, the NLS role is associative and cooperative rather than that of a paying customer.

2.4 NETWORK LIBRARY ROLES

The network libraries provide the service contact point with patrons who utilize the magazine program. This contact involves the initial enrollment of patrons with the program, changes in address and/or subscriptions, disenrollment, and addressing any problems with the service. The network libraries also forward information pertinent to the program to the CMLS contractor, which is the information that drives the manufacturing quantities and the distribution of the products. When the USPS returns undeliverable packages to the CMLS contractor, the CMLS contractor forwards this information to the appropriate network libraries so that follow-up can be facilitated.

2.5 CMLS ROLES

The CMLS contractor's primary mission with respect to the magazine program is the management and maintenance of the magazine subscription database; inputs to this database are received from network libraries and include additions, deletions, and changes to subscriptions and/or addresses. The CMLS contractor also must process an estimated 75,000 returned packages per year containing audio magazine and/or audio TBT packages in both formats; this processing consists of making suspend entries in the database, forwarding mailing envelopes with labels affixed to the appropriate network libraries, recycling the cardboard stiffeners used in the FD magazines, and turning any TBT on cassettes received over to the Boy Scouts, who de-label, degauss, and reuse the cassettes. Finally, the CMLS contractor provides Cheshire format hardcopy mailing labels to the FD magazine contractor and the TBT on cassette contractor who in turn apply them to the magazines to be mailed to patrons; the labels are provided in an ascending zip-code number sort on 11"x17" listings. In addition to supporting the NLS magazine and TBT program, the CMLS database also serves as a demographic database for the NLS (many individuals in the system do not subscribe to magazines or TBT).

2.6 NARRATION CONTRACTOR

2.6.1 Number and Location of Narration Contractors

There are presently two narration contractors for the magazine and TBT program, one located in Denver, CO and the other in Bethesda, MD. The Denver contractor does 89% of all magazine narration, and has been an NLS contractor for many years. In the current procurement arrangement, the narration contractors are subcontractors to the duplicators, who are the contractors to the NLS.

The narration contractor is responsible for obtaining a print copy of each magazine issue in the fastest possible manner. This process can therefore entail picking up a copy at the local newsstand, or using a courier service to pick up a copy at the publisher's office. Print copies of three magazines are provided by the NLS.

It is noted that DAS BESTE magazine is narrated in Germany, and master tapes requiring editing are provided as GFE. A full narration charge is billed by the contractor for this editing service.

The narration contractors provide 2-track analog master tapes to the duplicator. Expedited overnight delivery form Denver, CO is required because the duplicator is located in Clearwater, FL.

2.7 DUPLICATOR ROLES

The central focus of the study has been upon duplication operations, since the CMLS, network library, NLS, USPS and narrator roles are envisioned to remain fundamentally the same under any transition, although there will be changes.

2.7.1 Time Constraints for Publication

The required response times include narration, and are much more critical for titles that are frequently published. The contractor is required to fax to the NLS, within one working day, the day that print copies are received and the day that recorded copies are shipped.

2.7.2 The CMLS Interface

The CMLS contractor provides 1-1/4" x 3-1/4" shipping labels to the duplicators as GFE. The labels are available in 1-up and 4-up pressure sensitive format and in Cheshire (uncut) format, sorted in ascending zip-code order. Both the disc duplicator and the TBT cassette duplicator now use the Cheshire format.

Scheduled label delivery dates are set up for the individual publications at the beginning of each year by NLS, the producer, and the CMLS contractor. Occasionally, due to schedule changes, some labels are produced earlier than the scheduled production date. Labels for weekly publications are produced on a weekly basis. Labels for other frequency types (monthly, quarterly) are generally produced in the month preceding the date of the issue. For example, labels for a November dated publication would be printed and shipped to the producer in October.

Labels are now produced and sorted in ascending 5-digit zip code order, but the contractor has the capability to sort the labels in any desired sequence, including postal presorting for automation and non-automation mail. Commercial carriers are used to ship the labels to the producers.

2.7.3 Duplication/Shipping Operating Modes

The major steps that the duplicator performs in the production process are listed below.

- The 2-track analog master tape is converted to a disc master lacquer;
- Stampers to be used in the reproduction process are created from the lacquers in a process that requires several steps;
- Reproduction and labeling of the FDs occur in a single conveyorized operation, whereby vinyl roll-stock is heated, pressed (with the sound tracks and with braille), cooled, and printed upon;
- Packaging occurs on a conveyorized line whereby multiple disks are placed upon a cardboard stiffener and inserted into a single labeled envelope; and,
- Labeling of the mailing container is performed in a separate operation, whereby Cheshire labels must be cut and glued onto the mailing envelope for use in the packaging operation.

2.7.4 NLS Q.C. Interface

The primary QC interface that the duplicator has with the NLS is the furnishing of the final product for review, and additionally providing notification of the shipments. Occasional on-site QC monitoring by the NLS is also performed, with a frequency of approximately once or twice a year. The duplicator also performs standard internal QA checks on their FD production.

2.8 USPS ROLES

The USPS delivers all FD magazines and TBT under the provisions of the Free Matter for the Blind section of the Domestic Mail Manual, Section E040. This section states that Free Matter is not of any particular class of mail and is treated as First-Class mail for the purposes of determining the standards for processing and delivery and for handling, if undeliverable.

2.8.1 Present USPS Interface at the Present FD Contractor

The current FD magazine contractor does not perform any presorting of the mail for the USPS, nor are bar-codes of zip-codes used in the shipping process. The USPS picks up the mail at the contractor's facility.

The cardboard stiffener provided in the 9-1/4" x 9-3/4" shipping envelope does not eliminate bending of discs during bar coding, sorting and handling by the USPS, and the envelope does not fit in some patrons mailboxes.

2.8.2 Comparative USPS Interface at APH

American Printing House (APH) uses a special sort established by the USPS to expedite the delivery of time-sensitive periodicals. The sort that APH performs is by state, and zip-code within the state. The rate paid by private sector publishers for this service would be $.16 per package if it were not free matter.

The APH packing and shipping procedures and equipment include an automated corrugated sandwich pack, ink-jet printing of magazine title and issue date, patron address, and bar-coded zip codes; drop point sorting into plastic tote boxes provided by an in-house branch P.O., and delivery of the plastic totes directly to the Bulk Mail Center (BMC) in Cincinnati, thus bypassing the first class induction mailstream completely.

Bypassing the P.O. induction mailstream in the manner described, and the use of a 4-1/2" x 6-3/4" envelope package, that fits in patrons mailboxes, would largely obviate in-transit damage to magazine cassettes.

Section 3

CURRENT MAGAZINE COSTS

3.1 PRESENT DUPLICATION CONTRACT

3.1.1 General Terms

The contract duration is two years, and this is the option year of the current contract. The narration contractors have recently been made subcontractors, and narration costs are therefore included in the basic producer contract. The duplicator takes a mark-up on narration costs. There is a specified percentage escalation cost allowance for the second year of the duplication contract (5%).

3.1.2 Quantities Specified on the Bid Form/Contract

The bid quantities for narration are based on average read time per issue, whereas the bid quantities for duplication are based on the estimated number of discs per issue and the specified number of subscribers.

Actual read time per issue, actual discs per copy, and actual number of subscribers are used in invoicing the NLS. Partial discs are billed as full discs.

3.1.3 Cost Responses Specified on the Bid Form/Contract

Narration is priced as cost per minute, and duplication/labeling are priced as cost per disc. Packing/shipping costs are included in duplication/labeling costs.

Fixed costs per issue are not identified, but are of course included in the per disk costs quoted. Quoted costs will therefore not fully reflect the actual costs incurred by the contractor for some titles and issues, although they are included.

3.2 PUBLICATION COSTS

3.2.1 Present Costs

A summary of costs per title for the 12 months ending August 1995 is shown in Exhibit 3-A. These figures do not include reimbursed (non-Free Matter) transportation costs of approximately $12,000 per year. As noted, the cost per issue ranges from $1,288 to $14,143, and the annual cost per title ranges from $7,151 to $458,065.

3.2.2 Analysis of Present Narration Costs

Present narration costs per issue are shown in Appendix 3-1 and Appendix 3-2. The titles narrated by each of the two narration contractors have been separately grouped in Appendix 3-2, and are listed by ascending read time per issue. The first contractor has a rate of $4.09 per minute, and narrates seven titles. The second contractor has a rate of $4.37 per minute, and narrates 36 titles.

As noted, the weighted average narration time per issue is 274 minutes. Narration costs per issue varies from $258 to $3,710 and annual narration cost per title varies from $2,700 to $36,300. The weighted average narration cost per copy is $.29.

Also shown in Appendix 3-2 is an analysis of what narration costs per issue would have been after imputing a fixed cost per issue of $100. After deducting this fixed cost from narration cost per issue, the rate per minute for the first narrator would be $3.72 and the rate per minute for the second narrator would be $4.00. Total narration costs per year in each instance are identical. But the

Exhibit 3-A

SUMMARY OF PRESENT ANNUAL PUBLICATIONS COSTS BY TITLE

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1	2	3	4	5	6	7	8	9	10
MAGAZINE TITLE	Narration Cost Per Copy	Narration Cost Per Issue	Narration Cost Per Year	Duplication Cost Per Copy	Duplication Cost Per Issue	Duplication Cost Per Year	Narration & Duplication Cost Per Copy	Narration & Duplication Cost Per Issue	Narration & Duplication Cost Per Year
US NEWS AND WORLD REPORT	$0.084	$1,049	$52,440	$0.6490	$8,113	$405,625	$0.733	$9,161	$458,065
SPORTS ILLUSTRATED	$0.134	$782	$41,458	$0.4774	$2,784	$147,562	$0.612	$3,566	$189,021
GOOD HOUSEKEEPING	$0.176	$2,421	$29,052	$0.8520	$11,722	$140,662	$1.028	$14,143	$169,714
MONEY	$0.406	$2,281	$34,217	$0.9960	$5,596	$83,933	$1.402	$7,877	$118,150
CONSUMER REPORTS	$0.259	$2,133	$25,591	$0.9200	$7,566	$90,793	$1.179	$9,699	$116,384
ELLERY QUEENS MYSTERY MAGAZINE	$0.182	$1,713	$22,270	$0.7456	$7,009	$91,122	$0.928	$8,722	$113,392
NEW YORK TIMES	$0.108	$489	$25,451	$0.3313	$1,496	$77,783	$0.440	$1,985	$103,233
BOOK WORLD	$0.389	$651	$33,859	$0.7372	$1,234	$64,172	$1.126	$1,885	$98,031
NATION	$0.545	$760	$35,738	$0.8096	$1,129	$53,043	$1.355	$1,889	$88,781
NATIONAL REVIEW	$0.543	$1,333	$33,321	$0.8415	$2,065	$51,626	$1.385	$3,398	$84,947
KIPLINGER'S PERSONAL FINANCE MAGAZINE	$0.275	$1,765	$21,186	$0.8040	$5,157	$61,882	$1.079	$6,922	$83,068
ANALOG	$0.807	$2,482	$32,268	$1.2085	$3,715	$48,294	$2.016	$6,197	$80,562
NATIONAL GEOGRAPHIC	$0.064	$931	$11,170	$0.3788	$5,549	$66,584	$0.442	$6,479	$77,754
QST	$1.785	$3,028	$36,341	$1.7832	$3,026	$36,313	$3.568	$6,055	$72,654
PREVENTION	$0.089	$905	$10,855	$0.4422	$4,477	$53,727	$0.532	$5,382	$64,582
ENCORE	$1.250	$2,286	$27,426	$1.5215	$2,781	$33,376	$2.772	$5,067	$60,802
MAGAZINE OF THE MONTH	$0.277	$1,473	$17,672	$0.6585	$3,499	$41,991	$0.936	$4,972	$59,664
OUTDOOR LIFE	$0.475	$1,617	$19,403	$0.9156	$3,119	$37,433	$1.390	$4,736	$56,836
ATLANTIC MONTHLY	$0.427	$1,564	$18,774	$0.7059	$2,586	$31,037	$1.133	$4,151	$49,811
STEREO REVIEW	$0.811	$1,599	$19,190	$1.1748	$2,317	$27,800	$1.986	$3,916	$46,991
NATURAL HISTORY	$0.271	$940	$11,275	$0.8250	$2,862	$34,343	$1.096	$3,801	$45,618
HARPERS	$0.413	$1,320	$15,837	$0.7629	$2,439	$29,268	$1.176	$3,759	$45,105
JOURNAL OF COUNSELING & DEV.	$2.669	$3,710	$22,261	$2.5800	$3,586	$21,517	$5.249	$7,296	$43,778
SELECCIONES DEL READERS DIGEST	$1.620	$1,832	$21,988	$1.5784	$1,785	$21,422	$3.198	$3,617	$43,410
TRUE WEST	$0.145	$747	$8,967	$0.4910	$2,532	$30,385	$0.636	$3,279	$39,352
AMERICAN HERITAGE	$0.259	$1,363	$10,908	$0.6726	$3,539	$28,308	$0.932	$4,902	$39,216
NEW CHOICES	$0.261	$1,036	$10,357	$0.7131	$2,829	$28,289	$0.974	$3,865	$38,646
FARM JOURNAL	$0.573	$1,106	$14,373	$0.9342	$1,802	$23,427	$1.507	$2,908	$37,800
TRAVEL/HOLIDAY	$0.338	$1,088	$10,881	$0.7614	$2,454	$24,540	$1.099	$3,542	$35,421
WRITER	$0.539	$1,053	$12,638	$0.9279	$1,813	$21,757	$1.467	$2,866	$34,395
FOREIGN AFFAIRS	$0.812	$1,953	$13,674	$1.0244	$2,465	$17,253	$1.836	$4,418	$30,927
EBONY	$0.294	$909	$10,908	$0.5094	$1,575	$18,901	$0.803	$2,484	$29,808
JOURNAL FRANCAIS D'AMERIQUE	$1.921	$569	$13,076	$2.4318	$720	$16,556	$4.352	$1,288	$29,631
BESTE AUS READERS DIGEST	$4.502	$1,342	$16,099	$3.3054	$985	$11,820	$7.807	$2,327	$27,919
BUENHOGAR	$1.521	$1,121	$13,448	$1.6314	$1,202	$14,428	$3.152	$2,323	$27,876
SOCIAL WORK	$2.356	$2,919	$17,515	$1.0542	$1,306	$7,837	$3.410	$4,225	$25,352
CHILDRENS MAGAZINE PROGRAM	$0.100	$315	$3,776	$0.5670	$1,788	$21,453	$0.667	$2,102	$25,229
CIVILIZATION	$0.756	$1,512	$9,072	$0.9300	$1,860	$11,160	$1.686	$3,372	$20,232
HISTORIC PRESERVATION	$0.751	$1,280	$7,682	$1.0962	$1,868	$11,208	$1.848	$3,148	$18,890
QUARTERLY MUSIC MAGAZINE	$0.673	$1,710	$6,838	$1.1476	$2,917	$11,669	$1.820	$4,627	$18,507
NATIONAL GEOGRAPHIC WORLD	$0.091	$258	$3,094	$0.3813	$1,084	$13,004	$0.472	$1,341	$16,098
CONTEMPORARY SOUNDTRACK	$0.389	$724	$4,344	$0.7006	$1,305	$7,827	$1.089	$2,028	$12,171
MUSICAL MAINSTREAM	$0.500	$675	$2,699	$0.8244	$1,113	$4,452	$1.324	$1,788	$7,151
TOTAL MAGAZINES			$809,389			$2,075,583			$2,884,972
WEIGHTED AVERAGE PER ISSUE									
TALKING BOOK TOPICS-FD-IND, DISC				$0.2854	$13,128	$78,770			
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.				$0.0574	$2,640	$15,842			
TALKING BOOK TOPICS-FD-IND, ORD. FORM				$0.1632	$7,507	$45,043			
TALKING BOOK TOPICS-FD-IND				$0.5060	$23,276	$139,656			
TALKING BOOK TOPICS-FD-BULK				$0.2854	$2,854	$17,124			
TALKING BOOK TOPICS-FD					$26,130	$156,780			
TALKING BOOK TOPICS-CASSETTE, CASS.				$0.4450	$44,500	$267,000			
TALKING BOOK TOPICS-CASSETTE, PK./FM.				$0.2380	$23,800	$142,800			
TALKING BOOK TOPICS-CASSETTE				$0.6830	$68,300	$409,800			
TALKING BOOK TOPICS-TOTAL	$0.007	$1,049	$6,293		$94,430	$566,580	$0.612	$95,479	$572,873
GRAND TOTAL			$815,682			$2,642,163			$3,457,845

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Costs based upon FY96 contract rates & workload statistics for 12-mon. end 8/95

modified costs are probably much more reflective of the actual costs incurred by the narrators for specific issues.

Exhibit 3-B is a graph that depicts both present narration costs per issue and the modified costs per issue. Note that the two cost lines for the first narrator and the two cost lines for the second narrator both cross at a read time of 274 minutes. By this standard, titles with a narration time of less than 274 minutes are currently being undercharged, and titles with a narration time of more than 274 minutes are being overcharged.

These cost relationships could be used as a negotiating strategy if a decision is made to unbundle narration costs and seek bids from new narrators for the first group of titles that could be converted to cassette format. We believe that prospective savings in narration costs have a greater potential than savings in duplication costs, and should be much easier to come by. These potential savings are not related to a change in magazine format. However, narration costs were not the focus of this study, so no additional analyses or research in this regard was performed.

3.2.3 Analysis of Present Duplication/Shipping Costs

Present costs per copy, per issue and per year are shown in Exhibit 3-C, and the titles are listed in descending cost per copy. As noted, duplication/shipping costs range from $3.31 to $.33 per copy, and the weighted average is $.69.

The behavior of current duplication and shipping costs was developed by regression and correlation analyses, some of the results of which are shown in Appendices 3-3 through 3-7. These analyses yielded the result that the fixed costs of FD production are approximately a $100 "set-up" cost per issue plus an additional $260 per disk per copy per issue. These high fixed costs are endemic to the production processes used, and appear to be fully reflected in the per-disc prices quoted. The production processes for duplication/shipping of cassettes should have a significantly

Exhibit 3-B

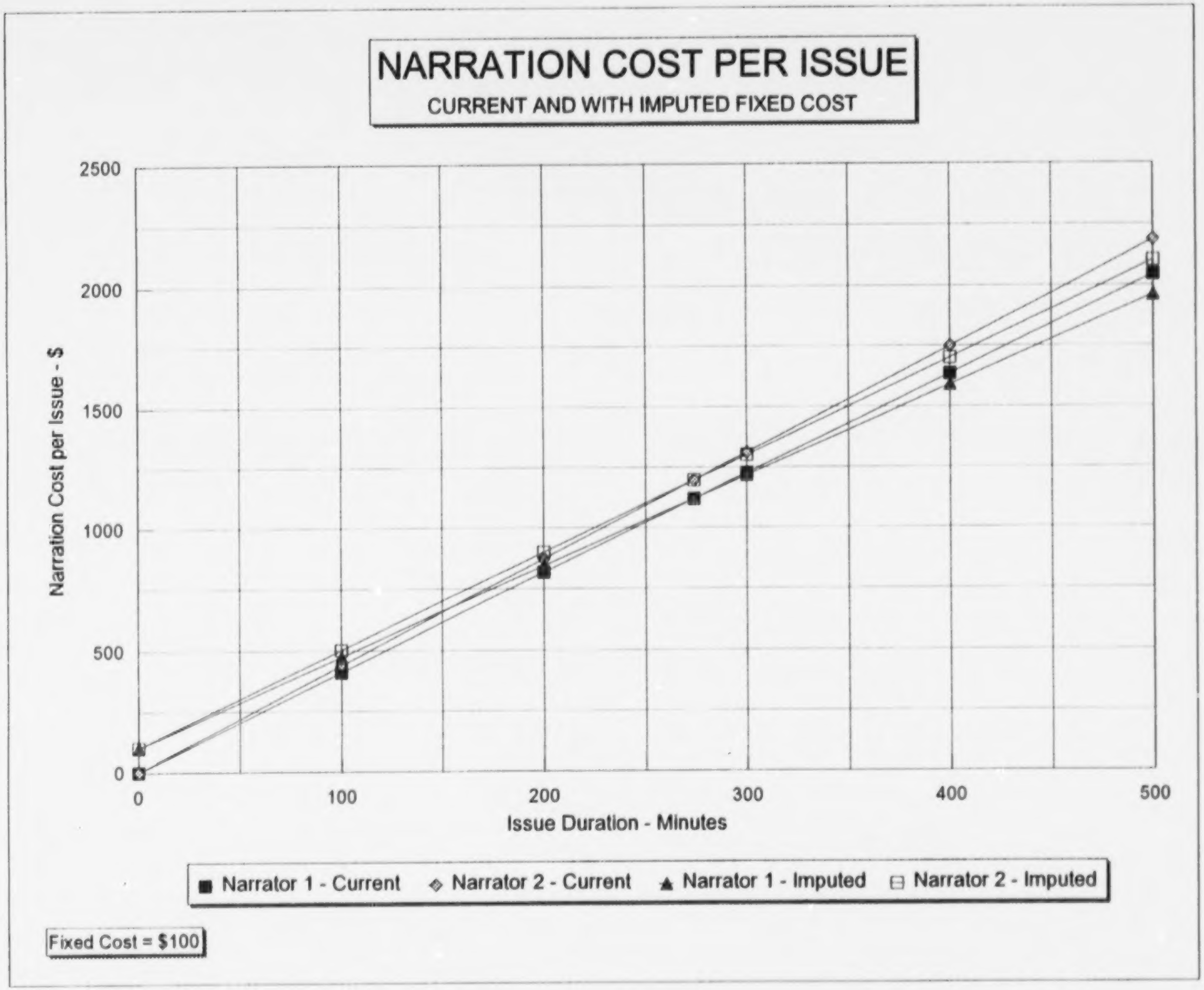
NARRATION COST PER ISSUE
CURRENT AND WITH IMPUTED FIXED COST
Narration Cost per Issue - $
2500
2000
1500
1000
500
0
0
100
200
300
400
500
Issue Duration - Minutes
■ Narrator 1 - Current
◇ Narrator 2 - Current
▲ Narrator 1 - Imputed
⊟ Narrator 2 - Imputed
Fixed Cost = $100

Exhibit 3-C

ANNUAL DUPLICATION COSTS BY TITLE IN DESCENDING COST PER COPY ORDER

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1	2	3	4	5	6	7	8	9
MAGAZINE TITLE	Issues per Year	Average Copies Per Issue	Average Copies Per Year	Average Discs Per Copy	Duplication Unit Cost Per Disc	Duplication Cost Per Copy	Duplication Cost Per Issue	Duplication Cost Per Year
BESTE AUS READERS DIGEST	12	298	3,576	3	$1.1018	$3.3054	$985	$11,820
JOURNAL OF COUNSELING & DEV.	6	1,390	8,340	8	$0.3225	$2.5800	$3,586	$21,517
JOURNAL FRANCAIS D'AMERIQUE	23	296	6,808	2	$1.2159	$2.4318	$720	$16,556
QST	12	1,697	20,364	6	$0.2972	$1.7832	$3,026	$36,313
BUENHOGAR	12	737	8,844	3	$0.5438	$1.6314	$1,202	$14,428
SELECCIONES DEL READERS DIGEST	12	1,131	13,572	4	$0.3946	$1.5784	$1,785	$21,422
ENCORE	12	1,828	21,936	5	$0.3043	$1.5215	$2,781	$33,376
ANALOG	13	3,074	39,962	5	$0.2417	$1.2085	$3,715	$48,294
STEREO REVIEW	12	1,972	23,664	4	$0.2937	$1.1748	$2,317	$27,800
QUARTERLY MUSIC MAGAZINE	4	2,542	10,168	4	$0.2869	$1.1476	$2,917	$11,669
HISTORIC PRESERVATION	6	1,704	10,224	3	$0.3654	$1.0962	$1,868	$11,208
SOCIAL WORK	6	1,239	7,434	6	$0.1757	$1.0542	$1,306	$7,837
FOREIGN AFFAIRS	7	2,406	16,842	4	$0.2561	$1.0244	$2,465	$17,253
MONEY	15	5,618	84,270	5	$0.1992	$0.9960	$5,596	$83,933
FARM JOURNAL	13	1,929	25,077	3	$0.3114	$0.9342	$1,802	$23,427
CIVILIZATION	6	2,000	12,000	3	$0.3100	$0.9300	$1,860	$11,160
WRITER	12	1,954	23,448	3	$0.3093	$0.9279	$1,813	$21,757
CONSUMER REPORTS	12	8,224	98,688	5	$0.1840	$0.9200	$7,566	$90,793
OUTDOOR LIFE	12	3,407	40,884	4	$0.2289	$0.9156	$3,119	$37,433
GOOD HOUSEKEEPING	12	13,758	165,096	5	$0.1704	$0.8520	$11,722	$140,662
NATIONAL REVIEW	25	2,454	61,350	3	$0.2805	$0.8415	$2,065	$51,626
NATURAL HISTORY	12	3,469	41,628	3	$0.2750	$0.8250	$2,862	$34,343
MUSICAL MAINSTREAM	4	1,350	5,400	2	$0.4122	$0.8244	$1,113	$4,452
NATION	47	1,394	65,518	2	$0.4048	$0.8096	$1,129	$53,043
KIPLINGER'S PERSONAL FINANCE MAGAZIN	12	6,414	76,968	4	$0.2010	$0.8040	$5,157	$61,882
HARPERS	12	3,197	38,364	3	$0.2543	$0.7629	$2,439	$29,268
TRAVEL/HOLIDAY	10	3,223	32,230	3	$0.2538	$0.7614	$2,454	$24,540
ELLERY QUEENS MYSTERY MAGAZINE	13	9,401	122,213	4	$0.1864	$0.7456	$7,009	$91,122
BOOK WORLD	52	1,674	87,048	2	$0.3686	$0.7372	$1,234	$64,172
NEW CHOICES	10	3,967	39,670	3	$0.2377	$0.7131	$2,829	$28,289
ATLANTIC MONTHLY	12	3,664	43,968	3	$0.2353	$0.7059	$2,586	$31,037
CONTEMPORARY SOUNDTRACK	6	1,862	11,172	2	$0.3503	$0.7006	$1,305	$7,827
AMERICAN HERITAGE	8	5,261	42,088	3	$0.2242	$0.6726	$3,539	$28,308
MAGAZINE OF THE MONTH	12	5,314	63,768	3	$0.2195	$0.6585	$3,499	$41,991
US NEWS AND WORLD REPORT	50	12,500	625,000	2	$0.3245	$0.6490	$8,113	$405,625
CHILDRENS MAGAZINE PROGRAM	12	3,153	37,836	2	$0.2835	$0.5670	$1,788	$21,453
EBONY	12	3,092	37,104	2	$0.2547	$0.5094	$1,575	$18,901
TRUE WEST	12	5,157	61,884	2	$0.2455	$0.4910	$2,532	$30,385
SPORTS ILLUSTRATED	53	5,832	309,096	2	$0.2387	$0.4774	$2,784	$147,562
PREVENTION	12	10,125	121,500	2	$0.2211	$0.4422	$4,477	$53,727
NATIONAL GEOGRAPHIC WORLD	12	2,842	34,104	1	$0.3813	$0.3813	$1,084	$13,004
NATIONAL GEOGRAPHIC	12	14,648	175,776	2	$0.1894	$0.3788	$5,549	$66,584
NEW YORK TIMES	52	4,515	234,780	1	$0.3313	$0.3313	$1,496	$77,783
TOTAL MAGAZINES	681		3,009,662					$2,075,583
WEIGHTED AVERAGE PER ISSUE		4,419		2.7		$0.6896		
TALKING BOOK TOPICS-FD-IND, DISC	6	46,000	276,000	2	$0.1427	$0.2854	$13,128	$78,770
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6	46,000	276,000	1	$0.0574	$0.0574	$2,640	$15,842
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	46,000	276,000	1	$0.1632	$0.1632	$7,507	$45,043
TALKING BOOK TOPICS-FD-IND	6	46,000	276,000			$0.5060	$23,276	$139,656
TALKING BOOK TOPICS-FD-BULK	6	10,000	60,000	2	$0.1427	$0.2854	$2,854	$17,124
TALKING BOOK TOPICS-FD	6	56,000	336,000				$26,130	$156,780
TALKING BOOK TOPICS-CASSETTE, CASS.	6	100,000	600,000	1	$0.4450	$0.4450	$44,500	$267,000
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6	100,000	600,000	1	$0.2380	$0.2380	$23,800	$142,800
TALKING BOOK TOPICS-CASSETTE	6	100,000	600,000			$0.6830	$68,300	$409,800
TALKING BOOK TOPICS-TOTAL	6	156,000	936,000				$94,430	$566,580
GRAND TOTAL	687	327,712	3,945,662					$2,642,163

Costs based upon FY96 contract rates & workload statistics for 12-mon. end 8/95

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lower fixed cost component. This should make cassette production costs more favorable for those titles having a small number of subscribers, and especially if they have long read times as well (which requires the preparation of a large number of stampers).

3.3 AUDIO MACHINE COSTS

Appendix 3-8 presents an analysis of current audio playback machine costs. These costs are considered to consist of two components: 1) recurring repair costs in both parts and labor (90% of which is volunteer), and 2) depreciation, or depletion costs, as machines have finite useful lives. Such fundamental parameters as the Mean Time Between Repairs, Mean Time to Repair, percentage of paid staff versus volunteer repairs, average repair parts consumption, average machine current replacement cost, and average machine lifetime are shown in the column headers of this appendix.; the study team would welcome any refinements to these parameters that can be provided in time for publication of the final report. However, these estimates were made with the best information available, and using reasonable assumptions. Finally, these estimates assume that only NLS-produced media are read on the machines.

3.4 CMLS COSTS

Because we did not make a site visit to the CMLS contractor, and the financial information provided to the NLS does not permit the separation of costs associated with the magazine program from the other functions performed by CMLS for the NLS, we present neither current nor pro forma CMLS costs in this report. It is anticipated that there would be no significant impact on CMLS costs as a result of the conversion of the magazine format.

3.5 FREE MAIL COSTS

The current costs of the USPS providing Free Matter transport for magazine program materials is shown in Appendix 3-9. Postal rates were based upon first-class processing and costs.

Repeated attempts were made to meet with the USPS and or the LOC USPS liaison in order to determine what rate(s) are the most appropriate to use for these purposes, as well as what bar-coding and/or presorting procedures would be best employed by the magazine manufacturer in the shipping function. Unfortunately, this information was not made available to the study team in time for use in this report; we hope that before the final report is published some of this information can be provided to us.

3.6 POST-PATRON DISPOSITION PRACTICES AND DISPOSAL COSTS

3.6.1 Disposition Practices

Once flexible disc magazines have been listened to and become outdated, they become waste. Some patrons may keep a few magazine titles that they consider desirable, but eventually these too will become waste. The patron throws the discarded discs into the household trash, to be collected and disposed of at a municipal landfill. It should be noted in passing that many patrons have expressed interest and support towards recycling efforts in general.

Industry contacts and review of the data collected regarding the final disposition of NLS FDs, have not revealed any current nationwide recycling program for vinyl discs. As for the chipboard stiffeners and envelopes, the CMLS contractor, Data Management Associates of Melbourne, Florida, recycles 63,800 of each, annually.

Statistics and cost estimates for current waste disposal generated by the magazine program are detailed in Appendix 3-10, and associated environment issues of the current magazine program are discussed in Appendix 3-11.

3.6.2 Disposal Costs

Different cities, towns, counties, etc. have various methods of assessing and collecting fees associated with household waste disposal. The analysis of these individual disposal costs was not practical. A nationwide average was therefore developed to determine landfill costs, based on the charges of individual landfills that were contacted throughout the United States. The average landfill cost for household waste was thus found to be $38.00 per ton.

There are no landfill fees associated with waste size, and as the flexible discs can be thrown out by the patron, there are no labor fees either. Hauling fees are negotiable depending on the quantity of waste. Most of the landfills that were contacted had hauling divisions and were willing to haul for no additional fee provided there was enough waste to fill a dumpster or truckload. Exhibit 3-D below shows the annual costs now associated with disposal of flexible discs, chipboards and envelopes, assuming that there are no labor or hauling costs.

Exhibit 3-D
TOTAL ANNUAL LANDFILL DISPOSAL COSTS FOR THE FLEXIBLE DISCS AND PACKAGING

ITEM	NO. OF UNRECYCLED UNITS GENERATED ANNUALLY	UNIT WEIGHT (GRAMS)	TOTAL WEIGHT (TONS)	TOTAL LANDFILL DISPOSAL COST @ $38/TON
Flexible Discs	8,868,400	8	78	$2,964
Envelopes	3,221,900	14	50	$1,900
Chipboard	3,221,900	34	121	$4,598
GRAND TOTAL				$9,462

These landfill costs are based on the total quantities of flexible discs and unrecycled chipboards and envelopes used annually by the disc duplicator.

Section 4

FUNCTIONAL DESIGN OF AUDIO CASSETTE MAGAZINE SYSTEM

4.1 CRITIQUE OF PRESENT/POTENTIAL CASSETTE PRODUCERS

The following sites were visited to gather information on the topics shown:

- Eva-Tone, Inc., Clearwater, FL -- Production, packaging, and shipping of all NLS/BPH flexible disc magazines.

- American Printing House for the Blind (APH), Louisville, KY -- High-volume production of cassette magazines; high-speed packaging of cassettes for mailing.

- Recording for the Blind (RFB), Princeton, NJ -- System in which cassettes are returned from patrons, rerecorded, and reissued.

- Media International (MI), Oak Park, IL -- High volume duplication of cassettes.

4.1.1 General Qualifications

Eva-Tone is the FD magazine and disc book contractor and also produces some cassette books for the NLS. APH now produces cassette books for the NLS, and is a former supplier of TBT cassettes. RFB is not a current or former NLS supplier. MI is the current supplier of TBT cassettes, and also produces cassette books for the NLS.

All of the potential producers have other customers and the NLS does not provide the major portion of their business. Eva-Tone is also a producer of CDs, and has a large commercial printing department, as an adjunct of their basic business. RFB has only a small number of commercial accounts, as the primary purpose of their business is to custom duplicate special interest publications for handicapped students and research personnel.

APH has a large in-house narration department. RFB has a small captive narration department, but relies on a satellite network for most all of their narration requirements. Neither Eva-Tone nor MI have a narration department.

4.1.2 Capacity Limitations

Eva-Tone, APH, and MI expressed no reservations about capacity limitations when presented with the pro forma publication requirement. Because of their unique small lot in-cassette duplication process, RFB would be qualified to produce only titles having a small subscriber base.

The pro forma startup date for title conversion was defined as fiscal 1997. None of the potential producers expressed any reservations about quickly ramping up to the required capacity levels by this target date.

An expressed objective of the NLS is to have more than one cassette supplier, not rely on a sole-source supplier, which is the current case for FD magazine production. This policy, when implemented should simultaneously ease concerns about the availability of sufficient capacity to support the conversion to cassette format.

4.1.3 Availability of Shells, Tape and Labels

All of the cassette producers visited indicated that they would have no supply problems with their shell and tape vendors, but expressed some concerns about their label vendors. One major print-braille label manufacturer was contacted in this regard, and it expressed the ability to meet the demand, but would require a period of more than one year but less than two years to ramp-up in order to handle all production needs. This will probably not be required since two of the prospective vendors have in-house label production capabilities, and if the contract is let to two or more bidders, this one supplier would not be responsible for all of national production requirements.

4.2 MAGAZINE CASSETTE SPECIFICATIONS

4.2.1 Current Specifications

There is no specification for cassette magazine duplication. The magazine mastering specification (#301) is dated September 1993, and the magazine cassette labeling and packaging specification (#404) is dated September, 1978. The requirements specified are essentially the same as those now specified for cassette books.

4.2.2 New Specifications

Original or revised specifications, when prepared, should address cassette magazines as an all-new audio systems design, having no established precedents. The input of suppliers should be solicited when preparing the specifications.

Timely development of the subject specifications will be a critical tasking in any transition plan that may be developed.

4.3 ALTERNATIVES TO REDUCE THE NUMBER OF CASSETTES AND COPIES REQUIRED

4.3.1 Read Time Per Cassette

There will be greater than 360 minutes of read time per cassette, with a possible maximum of 440 minutes. The initial maximum read time should be 400 minutes. Read time can then be further increased if/as positive feedback is received from readers and the network libraries.

Additionally, NLS will need to perform tests with current playback equipment to ensure that no problems will be encountered with a 440 minute load (there are minimal problems envisioned with the 400 minute load).

4.3.2 Time Compression

A time compression of up to 3% will be allowed to reduce the number of cassettes required per copy. Neither of the two present narration contractors now uses time compression. One proposes that it be used only selectively, while the other would prefer to use a uniform 3% compression for all issues.

4.3.3 Titles Per Issue

Two or more titles having the same frequency of issue and suitable total duration could be published as one issue, if their combination is found to be cost effective. Such consolidations can reduce both the number of shipments and the number of cassettes required. Both Encore magazine and Childrens Magazine Program now have two titles per issue. Four other title combinations have been singled out to illustrate the cost reduction potential of consolidation.

4.3.4 Cost Reduction Potential of Alternatives

For analysis purposes, the baseline cassette capacity was set at 360 minutes of read time and one title per issue. The alternatives are 400 and 440 minutes of read time per cassette, and one title per issue; and 360, 400 and 440 minutes of read time per cassette, with two titles per issue.

The annual cassette and shipment volumes for each of the identified alternatives are shown in Exhibit 4-A below.

Exhibit 4-A
ANNUAL CASSETTE PRODUCTION AND SHIPPING REQUIREMENTS FOR SIX POSSIBLE CASSETTE LOADINGS

Maximum Read Time Per Cassette	With One Title Per Copy		With Two Titles Per Copy	
	Shipments	Cassettes	Shipments	Cassettes
360 Minutes	3,010,000	3,727,000	2,955,000	3,781,000
400 Minutes	3,010,000	3,504,000	2,955,000	3,467,000
440 Minutes	3,010,000	3,455,000	2,955,000	3,431,000

As noted, the 400 minute / two-title alternative would reduce annual duplication requirements by 260,000 cassettes and annual shipping requirements by 55,000 copies.

The estimates of packing and shipping cost received from prospective producers range from \$.11 to \$.42 per copy, depending on the number of shipments per issue. Assuming a weighted average cost per copy of \$.25, the pro forma savings in packing and shipping costs for the 400-minute 2-title alternative would be \$13,750 per year.

Estimates of the cost of a labeled shell received from prospective producers range from \$.20 to \$.30. Assuming a weighted average cost per shell of \$.25, the pro forma saving in duplication costs for the 400-minute 2-title alternative would be \$65,000 per year.

A uniform 3% time compression for all issues, when implemented, would reduce tape costs by 3% per year.

4.3.5 Cassette Labeling Costs

The estimated cost of a print/braille label and its affixing to the shell is \$.13, which is approximately 13% of the pro forma total cost of an average cassette, and 19% of the pro forma cost of duplication/shipping. Cassette labeling has therefore been targeted as a key cost element that could significantly alter the economics of conversion.

The specification for labeling and packaging flexible disc magazines (#402) requires both printed and braille labeling on each disc. The braille identification requirement includes side number, title and date of issue. Disc labeling is fully automated at Eva-Tone. The braille notations are impressed on the disc along with the soundtrack, and the typographic notations are printed directly on the disc immediately thereafter.

The specification for labeling and packaging cassette magazines (#404) requires that an adhesive embossed braille/print combination label be used for cassette labeling. The braille identification requirement includes magazine title, side number of the first track of the cassette, and the number of cassettes in the magazine. The required labels are purchased in 1-up pressure sensitive format, and are normally affixed to the loaded shells as a separate operation. However, Eva-Tone has integrated cassette labeling into their packaging and shipping operation.

The prices quoted for braille/print labels by one of the specialty label suppliers used by the duplicators are shown below.

Exhibit 4-B COST OF PRINT/BRAILLE LABELS WITH TITLE SPECIFIC INFORMATION	
Number of Labels	Cost Per Label
300	$.310
500	$.230
1,000	$.130
5,000	$.065
10,000	$.058
15,000	$.055

As noted, the cost of these mandatory labels is quite high, particularly for titles having a small number of subscribers. For example, the cost of labels for Beste Aus Readers Digest, which has 298 subscribers and is published 12 times per year, would be approximately $.10 per cassette, if a full years requirement was purchased at one time. If date of issue was added to the labeling requirement, the cost per label would be $.31 per cassette.

As can be seen, the methodology now used by Eva-Tone for labeling discs now enjoys a distinct price advantage over the methodology now specified for labeling cassettes. This differential must be overcome if the project economics are to turn favorable. A possible alternative to cassette labeling is the packing list card described in Section 4.5.7.

4.4 FUNCTIONAL DESIGN OF ONE-WAY AUDIO CASSETTE SYSTEM

4.4.1 Cassette Shell

A standard sonic welded shell, of a quality appropriate for one-time play, is to be used. A screw-assembled shell of comparable quality can be used, if cost-effective.

The notation "Side 1" must either be molded into the front side of the shell, if reasonably cost efficient, or some other form of tactual differentiation (e.g. "ridges") from books must be provided on the shell in order to distinguish a magazine cassette from a book cassette. An additional cassette, if required, will have the notation "Side 5" molded into the front of the shell.

The uniform shell color chosen for magazine cassettes must visually distinguish them from standard book cassettes. This color must also provide an appropriate background for shell printing, if used.

The surface finish of the cassette must be compatible with any cassette printing technique that may be used.

4.4.2 Cassette Tape

A voice grade C-90 tape will be used.

The maximum permitted length of tape per cassette will be determined by the NLS; no vendors expressed a concern with using 400 minute loads, but one expressed concerns about using a 440 minute maximum load.

Tapes for issues requiring less than this maximum length will be cut to length.

4.4.3 Duplication Process

The narration contractor will provide a 2-track analog master to the duplicator.

A , bin loop, out-of-shell duplication process shall be used, with the final product being the standard 4-track, 15/16 ips analog tape. However, the vendor can use either an analog or digital bin for reproduction of copies to accomplish the work: one of the three cost estimates received from prospective vendors was based upon digital bin reproduction, and two were based upon analog bin reproduction.

4.4.4 Hub Locks

There are to be no reel hub locks; given the types of packaging specified, experience has shown that spooling is not a problem.

4.4.5 Cassette Labeling

A braille label, if required, will be smaller than the present book label. Note that a smaller braille label, or the absence of a label, might be sufficient to tactually distinguish a magazine cassette from a book cassette.

If no braille label is required, printing can then be done directly on the shell (on either or both sides). This would be the most cost effective cassette labeling mode, but its marginal utility would not be as great to the patron.

The NLS will later determine how multiple titles can best be identified on a cassette, i.e. whether two labels will be required, or only one.

There is to be no printing on the label or on the shell to indicate that a cassette is government property.

4.4.6 Shipping Envelope

The shipping package will be a 32-pound Kraft top-opening, self-closing envelope measuring 6-3/4" long x 4-1/2" high, that will hold either one or two cassettes; a larger envelope will be used for those rare titles that require three cassettes per copy. The cassettes will be inserted in the envelope short edge first.

A standard preprinted envelope will be used for shipping all titles and issues. The printing will include only the return address (CMLS), the Free Matter postal classification, the Library of Congress logo, and the name and address of the NLS. The magazine title and issue number now printed on the package will appear on the address label.

4.4.7 Package Label

A larger address label, containing the magazine title and issue number, will be produced by CMLS in 1-up pressure-sensitive format, thus enabling the packaging and labeling processes to be fully integrated.

The larger label could also be produced by CMLS in Cheshire format. However, the use of Cheshire labels requires that package labeling be performed as a separate operation, which is not conducive to automation.

The zip code of the patron must be bar coded on the label in conformance with USPS standards.

4.4.8 CMLS Interface

The CMLS contractor will prepare and forward address labels to the producer in a timely manner, and in a format suitable for automated in-line labeling of shipping packages, and in the sort specified by the duplicator.

C1

4.4.9 Packaging/Shipping Process

The packaging run is to be made in zip code sequence, and all zip codes that are to be delivered to the same designated USPS distribution point, are to be run in sequence also (we hope to be able to further detail this requirement/recommendation for the final report if specific information from the USPS can be obtained).

Packaged cassettes are to be batched by USPS distribution point in corrugated plastic totes provided by the USPS, and the totes are to be labeled with address labels also provided by the USPS.

4.4.10 Undeliverable Packages

Undeliverable packages will be returned to the CMLS contractor, who will dispose of the envelopes, cassettes, or unopened packages as instructed by the NLS.

4.5 FUNCTIONAL DESIGN OF REUSABLE AUDIO CASSETTE SYSTEM

4.5.1 Cassette Shell

A standard sonic welded shell, of a quality appropriate for multi-time play, is to be used. A screw-assembled shell of comparable quality can be used, if cost effective. Durability of book cassette quality is not required because typical usage is envisioned as one initial use and three times for reuse.

The notation "Side 1" must either be molded into the front side of the shell, if reasonably cost efficient, or some other form of tactual differentiation (e.g. "ridges") from books must be provided on the shell in order to distinguish a magazine cassette from a book cassette. An additional cassette, if required, will have the notation "Side 5" molded into the front of the shell.

The uniform shell color chosen for magazine cassettes must visually distinguish them from standard book cassettes.

4.5.2 Cassette Tape

A voice grade C-90 tape will be used.

All tapes will be cut to a standard length that will be determined by the NLS, i.e. 360 minutes, 400 minutes, etc..

4.5.3 Preparation for Reuse

The tapes of returned cassettes shall be degaussed while in the cassette to remove all traces of previous recordings.

Returned cassettes are to be sorted and oriented by side number prior to reuse.

4.5.4 Duplication Process

The narrator will provide a 2-track analog master to the duplicator.

An in-cassette duplication process from cassette analog masters shall be used.

Any new cassettes required for attrition makeup are to be preloaded with tape prior to duplication, or otherwise be purchased preloaded.

4.5.5 Hub Locks

There are to be no reel hub locks.

4.5.6 Cassette Labeling

No title-specific information is to appear on a cassette in print, braille or print-braille form.

There is to be no marking on the shell to indicate that a cassette is government property.

4.5.7 Packing List/Address Card

A combination contents/address/return address card, designed for use with a window envelope, will accompany all patron shipments and all patron returns.

The card will describe the magazine(s) shipped in print format, and also in braille format, if required, plus any other notations that would normally appear on a cassette label.

The patron address and the magazine title and issue number should be on the front of the card, and so positioned as to be visible through the window of the prescribed shipping envelope when packed. The producer address should be on the back of the card and so positioned as to be visible through the window of the envelope when the return shipment is packed.

The address card should measure 6-1/4" long x 4-1/4" high, should be made of 110-pound card stock, and should be printed in 1-up format. A dog-ear should be cut off one corner to assist the patron in properly positioning the card when packing cassettes for return to the producer.

The zip code of both the patron and the producer must be bar coded in conformance with USPS standards.

4.5.8 Shipping Envelope

The shipping package will be a 32-pound Kraft, end opening, clasp closure, window envelope measuring 6-3/4" long x 4-3/4" high, that will hold either one or two cassettes; a special package will be used for those few copies that require three cassettes. The cassettes will be oriented upright in the envelope.

The envelope is to be designed for reuse by the patron to return cassettes to the producer, and will also be reused by the producer, if in good condition.

A standard preprinted envelope will be used for shipping all titles and issues. The printing on the envelope will include only the return address (CMLS), the Free Matter postal classification, and the NLS name and logo.

4.5.9 CMLS Interface

The CMLS contractor will prepare and forward address cards to the producer in a timely manner, and in a format suitable for automated in-line insertion of the cards in window envelopes.

4.5.10 Packaging/Shipping Process

The packaging run is to be made in zip code sequence, and all zip codes that are to be delivered to the same designated USPS distribution point, are to be run in sequence also.

Packaged cassettes are to be batched by USPS distribution point in corrugated plastic totes provided by the USPS, and are to be labeled with labels also provided by the USPS.

4.5.11 Undeliverable Packages

Undeliverable packages will be returned to the CMLS contractor, who will periodically forward the cassettes and mailing envelopes to the cassette producer after extracting the information that both CMLS and the network libraries require to process suspensions/changes for the undeliverable package.

4.5.12 Attrition Rate for Components

For planning purposes, assume that 80% of cassette shipments received by patrons will be returned to the producer by patrons, or by the CMLS contractor.

For shells and tape, assume that an additional 5% will be rejected for reuse. Shells and tapes will therefore be used/reused an average of four times.

For shipping envelopes, assume that an additional 13.3% will be rejected for reuse. Envelopes will therefore be used/reused an average of three times.

Section 5

PRO FORMA MAGAZINE COSTS

5.1 DUPLICATION/SHIPPING COSTS

This subsection presents the pro forma duplication/shipping costs of the one-way and reusable cassette options, and describes how they were developed. Narration costs were previously discussed in Section 3.2.2, and will not change with change in magazine format; the same outcome is expected for the CMLS operations and network library and NLS operations with respect to the magazine program.

5.1.1 Polling of Prospective Duplicators

The pro forma costs of producing, packing and shipping magazine cassettes were obtained from selected duplicators who expressed an interest in participating in the feasibility study. The duplicators were provided with baseline production specifications for both the one-way and the reusable cassette options, for use in preparing their cost estimates. These specifications outlined the formative duplication/shipping processes, and included a listing of the major cost elements that should be used in preparing the cost estimates.

The duplicators were first asked to select one high, one medium and one low volume title from the 43 titles now published, and to provide informed estimates of the cost of producing, packing and shipping one issue of each title. They were then asked to provide similar estimates for three specified titles, and for one issue that would combine two specified titles on one cassette. Because the prospective vendors were promised that their estimates would remain confidential, they have been identified for the purposes of this report as Vendor A, Vendor B and Vendor C.

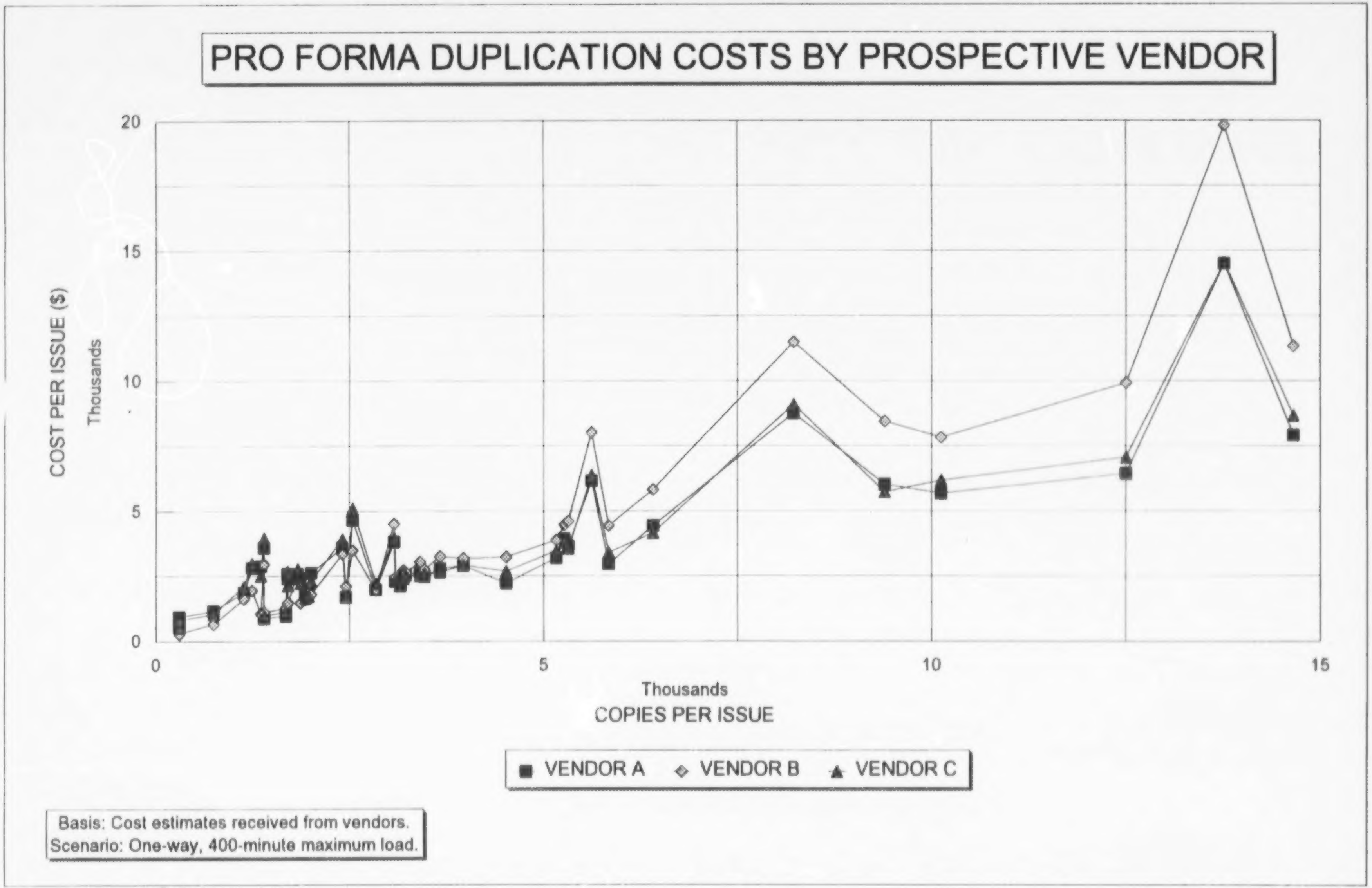
5.1.2 One-way Cassette Option

Exhibit 5-A is a graph that plots the cost-per-issue versus copies-per-issue relationship of the cost estimates received. Each entry on the chart is coded to denote the duplicator who provided the cost estimate. A comparison of vendor price estimates across all 43 magazine titles can be found in Appendix 5-1. The extrapolations for each vendor were performed using regression and correlation analysis with the objective of determining the relationship that is most robust in the prediction of cost across multiple titles quoted.

The fixed cost component of duplication operations are less for cassette magazines than for FD magazines. Specifically, it was determined that the fixed cost per issue for FD duplication is approximately $100 for "initial set-up" and an additional $265 per-disc-per-copy per issue, i.e. regardless of run size or title duration, there is an initial $100 set-up expense associated with each job, and another $265 for each stamper that needs to be manufactured (Ref. Appendices 3-5 to 3-7). On average, the fixed cost of FD duplication is just over $900 per issue given the current workload mix (Ref. Appendix 3-4). This cost is higher than the fixed cost per issue for cassette magazines, which means that the pro forma costs for small production runs of cassettes should be lower than those of discs if unit variable costs for cassettes are identical or close to those of FDs.

The pro forma cost per copy and per year for all titles is shown in Exhibit 5-B. The titles are listed in the same sequence as the titles in the tabulation of present disc costs (Exhibit 3-C), so that a title-by-title comparison of present and pro forma costs can be readily made; current duplication cost per copy and per year are also shown in this exhibit. In this exhibit: Columns 4-6 show a minimum production cost scenario, whereby either disc or cassette format is used, whichever is less expensive, and the cost estimates of the lowest cost individual vendors were used; Columns 7-9 show a minimum production cost scenario whereby only cassette format is used, and the cost estimates of the lowest cost individual vendors were used; Columns 10-12 show a minimum

Exhibit 5-A



Basis: Cost estimates received from vendors.
Scenario: One-way, 400-minute maximum load.

Exhibit 5-B

PRO FORMA DUPLICATION COSTS FOR MAGAZINE PROGRAM - SEVERAL COMPARISONS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			400	400	400	400	400	400	400	400	400	400	400	400
	7		FD OR CASSETTE, IND VENDOR			CASSETTE ONLY, IND VENDOR			FD OR CASSETTE, AVERAGED			CASSETTE ONLY, AVERAGED		
MAGAZINE TITLE	Current Duplication Cost Per Copy	Current Duplication Cost Per Year	Minimum Duplication Cost Per Year	Minimum Duplication Cost SOURCE	Minimum Duplication Cost SAVINGS	Minimum Duplication Cost Per Year	Minimum Duplication Cost SOURCE	Minimum Duplication Cost SAVINGS	Minimum Duplication Cost Per Year	Minimum Duplication Cost SOURCE	Minimum Duplication Cost SAVINGS	Duplication Cost Per Year	Duplication Cost SOURCE	Duplication Cost SAVINGS
BESTE AUS READERS DIGEST	$3.31	$11,820	$3,757	VENDOR B	$8,063	$3,757	VENDOR B	$8,063	$8,201	CASSETTE	$3,620	$8,201	CASSETTE	$3,620
JOURNAL OF COUNSELING & DEV	$2.56	$21,517	$17,730	VENDOR B	$3,787	$17,730	VENDOR B	$3,787	$20,996	CASSETTE	$521	$20,996	CASSETTE	$521
JOURNAL FRANCAIS D'AMERIQUE	$2.43	$16,556	$6,392	VENDOR B	$10,164	$6,392	VENDOR B	$10,164	$10,481	CASSETTE	$6,074	$10,481	CASSETTE	$6,074
QST	$1.78	$36,313	$30,890	VENDOR A	$5,423	$30,890	VENDOR A	$5,423	$31,512	CASSETTE	$4,801	$31,512	CASSETTE	$4,801
BUENHOGAR	$1.63	$14,428	$7,946	VENDOR B	$6,482	$7,946	VENDOR B	$6,482	$11,442	CASSETTE	$2,986	$11,442	CASSETTE	$2,986
SELECCIONES DEL READERS DIGEST	$1.58	$21,422	$19,282	VENDOR B	$2,140	$19,282	VENDOR B	$2,140	$21,422	DISC	$0	$22,197	CASSETTE	($775)
ENCORE	$1.52	$33,376	$30,946	VENDOR A	$2,430	$30,946	VENDOR A	$2,430	$32,011	CASSETTE	$1,365	$32,011	CASSETTE	$1,365
ANALOG	$1.21	$48,294	$48,294	DISC	$0	$49,508	VENDOR A	($1,214)	$48,294	DISC	$0	$53,106	CASSETTE	($4,811)
STEREO REVIEW	$1.17	$27,800	$20,610	VENDOR C	$7,191	$20,610	VENDOR C	$7,191	$21,701	CASSETTE	$6,099	$21,701	CASSETTE	$6,099
QUARTERLY MUSIC MAGAZINE	$1.15	$11,669	$11,669	DISC	$0	$13,917	VENDOR B	($2,248)	$11,669	DISC	$0	$17,615	CASSETTE	($5,947)
HISTORIC PRESERVATION	$1.10	$11,208	$8,806	VENDOR B	$2,402	$8,806	VENDOR B	$2,402	$11,208	DISC	$0	$12,020	CASSETTE	($813)
SOCIAL WORK	$1.05	$7,837	$7,837	DISC	$0	$11,626	VENDOR B	($3,789)	$7,837	DISC	$0	$15,501	CASSETTE	($7,664)
FOREIGN AFFAIRS	$1.02	$17,253	$17,253	DISC	$0	$23,404	VENDOR B	($6,151)	$17,253	DISC	$0	$25,340	CASSETTE	($8,087)
MONEY	$1.00	$83,933	$83,933	DISC	$0	$92,400	VENDOR A	($8,467)	$83,933	DISC	$0	$102,594	CASSETTE	($18,661)
FARM JOURNAL	$0.93	$23,427	$20,811	VENDOR B	$2,616	$20,811	VENDOR B	$2,616	$21,428	CASSETTE	$1,999	$21,428	CASSETTE	$1,999
CIVILIZATION	$0.93	$11,160	$10,696	VENDOR B	$464	$10,696	VENDOR B	$464	$11,160	DISC	$0	$13,374	CASSETTE	($2,214)
WRITER	$0.93	$21,757	$19,259	VENDOR B	$2,498	$19,259	VENDOR B	$2,498	$20,262	CASSETTE	$1,495	$20,262	CASSETTE	$1,495
CONSUMER REPORTS	$0.92	$90,793	$90,793	DISC	$0	$105,029	VENDOR A	($14,236)	$90,793	DISC	$0	$117,353	CASSETTE	($26,560)
OUTDOOR LIFE	$0.92	$37,433	$30,036	VENDOR C	$7,397	$30,036	VENDOR C	$7,397	$32,863	CASSETTE	$4,570	$32,863	CASSETTE	$4,570
GOOD HOUSEKEEPING	$0.85	$140,662	$140,662	DISC	$0	$174,111	VENDOR A	($33,450)	$140,662	DISC	$0	$195,450	CASSETTE	($54,788)
NATIONAL REVIEW	$0.84	$51,626	$42,119	VENDOR A	$9,507	$42,119	VENDOR A	$9,507	$45,644	CASSETTE	$5,982	$45,644	CASSETTE	$5,982
NATURAL HISTORY	$0.83	$34,343	$29,631	VENDOR A	$4,712	$29,631	VENDOR A	$4,712	$30,977	CASSETTE	$3,366	$30,977	CASSETTE	$3,366
MUSICAL MAINSTREAM	$0.82	$4,452	$4,239	VENDOR B	$213	$4,239	VENDOR B	$213	$4,452	DISC	$0	$8,607	CASSETTE	($4,155)
NATION	$0.81	$53,043	$41,453	VENDOR A	$11,590	$41,453	VENDOR A	$11,590	$46,425	CASSETTE	$6,618	$46,425	CASSETTE	$6,618
KIPLINGER'S PERSONAL FINANCE MAGAZINE	$0.80	$61,882	$49,789	VENDOR C	$12,094	$49,789	VENDOR C	$12,094	$57,600	CASSETTE	$4,282	$57,600	CASSETTE	$4,282
HARPERS	$0.76	$29,268	$28,657	VENDOR C	$611	$28,657	VENDOR C	$611	$29,268	DISC	$0	$30,242	CASSETTE	($974)
TRAVEL/HOLIDAY	$0.76	$24,540	$24,540	DISC	$0	$25,152	VENDOR C	($612)	$24,540	DISC	$0	$25,608	CASSETTE	($1,068)
ELLERY QUEENS MYSTERY MAGAZINE	$0.75	$91,122	$74,629	VENDOR C	$16,493	$74,629	VENDOR C	$16,493	$87,494	CASSETTE	$3,628	$87,494	CASSETTE	$3,628
BOOK WORLD	$0.74	$64,172	$50,817	VENDOR A	$13,355	$50,817	VENDOR A	$13,355	$58,549	CASSETTE	$5,623	$58,549	CASSETTE	$5,623
NEW CHOICES	$0.71	$28,289	$28,289	DISC	$0	$28,977	VENDOR A	($688)	$28,289	DISC	$0	$30,003	CASSETTE	($1,714)
ATLANTIC MONTHLY	$0.71	$31,037	$31,037	DISC	$0	$31,724	VENDOR C	($687)	$31,037	DISC	$0	$34,701	CASSETTE	($3,664)
CONTEMPORARY SOUNDTRACK	$0.70	$7,827	$7,827	DISC	$0	$8,713	VENDOR B	($886)	$7,827	DISC	$0	$12,141	CASSETTE	($4,314)
AMERICA'S HERITAGE	$0.67	$28,308	$28,308	DISC	$0	$30,402	VENDOR C	($2,093)	$28,308	DISC	$0	$32,522	CASSETTE	($4,214)
MAGAZINE OF THE MONTH	$0.66	$41,991	$41,991	DISC	$0	$42,563	VENDOR C	($572)	$41,991	DISC	$0	$47,165	CASSETTE	($5,174)
US NEWS AND WORLD REPORT	$0.65	$405,625	$322,080	VENDOR A	$83,545	$322,080	VENDOR A	$83,545	$390,015	CASSETTE	$15,610	$390,015	CASSETTE	$15,610
CHILDRENS MAGAZINE PROGRAM	$0.57	$21,453	$21,453	DISC	$0	$25,451	VENDOR A	($3,998)	$21,453	DISC	$0	$26,703	CASSETTE	($5,250)
EBONY	$0.51	$18,901	$18,901	DISC	$0	$27,315	VENDOR A	($8,414)	$18,901	DISC	$0	$28,159	CASSETTE	($9,259)
TRUE WEST	$0.49	$30,385	$30,385	DISC	$0	$38,327	VENDOR A	($7,942)	$30,385	DISC	$0	$42,164	CASSETTE	($11,779)
SPORTS ILLUSTRATED	$0.48	$147,562	$147,562	DISC	$0	$156,732	VENDOR A	($9,169)	$147,562	DISC	$0	$190,244	CASSETTE	($42,681)
PREVENTION	$0.44	$53,727	$53,727	DISC	$0	$68,131	VENDOR A	($14,404)	$53,727	DISC	$0	$78,683	CASSETTE	($24,955)
NATIONAL GEOGRAPHIC WORLD	$0.38	$13,004	$13,004	DISC	$0	$23,476	VENDOR B	($10,472)	$13,004	DISC	$0	$24,491	CASSETTE	($11,487)
NATIONAL GEOGRAPHIC	$0.38	$66,584	$66,584	DISC	$0	$94,845	VENDOR A	($28,261)	$66,584	DISC	$0	$111,572	CASSETTE	($44,988)
NEW YORK TIMES	$0.33	$77,783	$77,783	DISC	$0	$114,853	VENDOR A	($37,071)	$77,783	DISC	$0	$140,658	CASSETTE	($62,875)
TOTAL MAGAZINES		$2,075,583	$1,862,405		$213,177	$2,057,229		$18,353	$1,996,942		$78,641	$2,365,813		($290,230)
WEIGHTED AVERAGE PER ISSUE														
TALKING BOOK TOPICS-FD-IND, DISC	$0.29	$78,770												
TALKING BOOK TOPICS-FD-IND, STIFR/ENV	$0.06	$15,842												
TALKING BOOK TOPICS-FD-IND, ORD. FORM	$0.16	$45,043												
TALKING BOOK TOPICS-FD-IND	$0.51	$139,656												
TALKING BOOK TOPICS-FD-BULK	$0.28	$17,124												
TALKING BOOK TOPICS-FD		$156,780												
TALKING BOOK TOPICS-CASSETTE, CASS	$0.45	$267,000												
TALKING BOOK TOPICS-CASSETTE, PK/FM	$0.24	$142,800												
TALKING BOOK TOPICS-CASSETTE	$0.69	$409,800												
TALKING BOOK TOPICS-TOTAL		$566,580	$566,580	BOTH	$0	$625,008	VENDOR A	($58,428)	$566,580	BOTH	$0	$710,656	CASSETTE	($144,076)
GRAND TOTAL		$2,642,163	$2,428,985		$213,177	$2,682,237		($40,075)	$2,563,522		$78,641	$3,076,469		($434,306)

Costs based upon current contract prices and pro forma vendor estimates.

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Scenario: one-way, disposable 400 minute maximum load.

production cost scenario whereby either disc or cassette format is used, whichever is less expensive, and the cost estimates of three vendors were averaged; and, Columns 13-15 show a production cost scenario whereby only the cassette format is used, and the cost estimates of three vendors were averaged. The values in Columns 6, 9, 12, and 15 show the incremental savings or costs relative to current costs for each of the four scenarios.

5.1.3 Reusable Cassette Option

Only one prospective duplicator responded to our request for cost estimates for the reusable cassette option. Because of this slim basis for estimation, one other major cost inefficiency of this option, and inferior quality of the product (in which all vendors concurred), these estimates were then compared directly with the cost estimates received for the one-way cassette option for that vendor for the same titles quoted before proceeding with extrapolation of the results to all 43 titles. The results of this comparison are presented in Exhibit 5-C.

As can be seen, the costs associated with the reusable, in-shell duplication production process are quite unfavorable relative to the one-way, out-of-shell duplication production process. Across the three titles quoted, which included one "slow", one "medium", and one "fast" moving title, the economies of reuse are shown to be inefficient relative to the one-way scenario. Our conclusion is that, despite the potential salvage of raw materials to offset new materials costs, the additional labor and capital equipment requirements required to effect such salvage and reuse more than offset the potential savings. For the above reasons, we did not develop the duplication costs for all 43 titles for the reuse scenario.

Exhibit 5-C

DUPLICATION ECONOMIES - ONE-WAY, OUT-OF-SHELL VERSUS MULTIPLE-USE IN-SHELL

	ONE-WAY, OUT-OF-SHELL DUPLICATION			
PRODUCTION COMPONENTS	**TITLE 1**	**TITLE 2**	**TITLE 3**	**PERCENT**
SHELL	$0.10	$0.20	$0.10	100.0%
TAPE	$0.08	$0.21	$0.11	100.0%
PRODUCTION	$1.04	$0.26	$0.13	100.0%
LABELS AND LABELING	$0.26	$0.20	$0.10	100.0%
PACKAGING MATERIAL	$0.03	$0.03	$0.03	100.0%
PACKING & SHIPPING	$0.39	$0.13	$0.05	100.0%
TOTAL COST PER COPY	$1.90	$1.03	$0.52	
	MULTIPLE-USE, IN-SHELL DUPLICATION			
PRODUCTION COMPONENTS	**TITLE 1**	**TITLE 2**	**TITLE 3**	**PERCENT**
SHELL	$0.10	$0.20	$0.10	
TAPE	$0.16	$0.32	$0.16	
PRODUCTION	$1.04	$0.78	$0.39	
PRINTING ON SHELL	$0.39	$0.12	$0.02	
CONTENTS/ADDRESS CARD	$0.52	$0.08	$0.06	
PACKAGING MATERIALS	$0.07	$0.07	$0.07	
PACKING & SHIPPING	$0.39	$0.13	$0.05	
SALVAGE OF PACKAGING MATL	$0.01	$0.01	$0.01	
SALVAGE OF SHELLS AND TAP	$0.65	$0.52	$0.26	
	ESTIMATED MULTIPLE-USE COSTS			
NEW SHELL	$0.03	$0.05	$0.03	25.0%
NEW TAPE	$0.04	$0.08	$0.04	25.0%
ALL PRODUCTION	$1.04	$0.78	$0.39	100.0%
PRINTING ON NEW SHELLS	$0.10	$0.03	$0.01	25.0%
ALL CONTENTS/ADDRESS CAR	$0.52	$0.08	$0.06	100.0%
NEW PACKAGING MATERIALS	$0.02	$0.02	$0.02	33.0%
ALL PACKING & SHIPPING	$0.39	$0.13	$0.05	100.0%
SALVAGE OF PACKAGING MATL	$0.01	$0.01	$0.01	67.0%
SALVAGE OF SHELLS AND TAP	$0.49	$0.39	$0.20	75.0%
TOTAL COST PER COPY	$2.63	$1.57	$0.79	
DIFFERENCE - COST PER COPY (REUSABLE LESS ONE-WAY)	$0.73	$0.54	$0.27	
DIFFERENCE - PERCENT (REUSABLE OVER ONE-WAY)	38.3%	52.2%	52.5%	

Source - Prospective vendor.

5.2 AUDIO MACHINE COSTS

The estimated costs for playback machine use and repair for the pro forma cassette magazine scenario are shown in Appendix 5-2. Annual repair costs are estimated at approximately $240,000, parts and labor (90% of the repair labor is estimated as performed by volunteers), and annual depletion or depreciation is estimated at $956,000 (using the cost of a new CBM machine for the depreciable basis...a conservative assumption, but valid), for a total annual machine cost of approximately $1,200,000. It was previously shown that approximately 15 million machine-hours are currently used annually by FD magazine and TBT on FD readers; this load would be shifted from TBMs to CBMs in a full conversion, which represents approximately an 8% increase in depletion and repairs of CBMs and a corresponding absolute (not relative) decrease in the same for TBMs. Because the estimated time between repairs for a TBM is slightly greater than a CBM, and because the time required to repair a TBM is somewhat less than that for a CBM, there will be a net increase in repair costs upon magazine format conversion.

Because the ratio of new machine cost to estimated useful life is almost identical for CBMs and TBMs (i.e. the unit depreciation), this component of machine cost is effectively a "wash out" in a pure accounting sense. However, because of the *trends* in machine availability previously cited in this report, i.e. with the declining popularity of TBs, the CBM depletion is a greater relative concern than that for TBMs *vis-a-vis* management of the national machine inventory.

5.3 CMLS COSTS

These cost elements consist of mailing list maintenance, processing undeliverable patron shipments and address labels, and label printing and shipping charges. These costs would be identical under both options, and are therefore not included in the cost comparisons. Additionally, we were not tasked with examining CMLS, and do not have the data necessary to make such cost comparisons.

However, several conceivable modifications to the CMLS operation can be cited. One change would consist of provision for larger 1-up pressure sensitive address labels or 1-up address cards containing the magazine title and issue number. Another would consist of accommodating two titles per issue in the mailing list if title consolidation were to be employed, while simultaneously maintaining the integrity of individual title subscriptions in the database itself. These would be one-time and not recurring charges, and are therefore not included in the cost comparisons.

5.4 FREE MAIL COSTS

5.4.1 One-way Cassette Option

The costs associated with USPS Free Matter mailings under the one-way cassette option (for the 400-minute maximum load scenario) are contained in Appendix 5-3. As was the case for current USPS Free Matter costs, shown in Appendix 3-9, the values are based upon 1995 USPS first-class rates and consider both the initial mailings and returns of packages. Because the cassette magazine packages are lighter on average than the disc packages, the USPS costs are lower under pro forma operations ($2,500,061 versus $3,131,208).

5.4.2 Reusable Cassette Option

The costs associated with USPS Free Matter mailings under the reusable cassette option are contained in Appendix 5-4. This scenario includes the costs of deliveries and return of undeliverables, but additionally includes the cost of packages being returned directly to the magazine manufacturer by the patrons. This quantity of returns is estimated as 80% of the packages received by the magazine subscribers.

5.5 POST-PATRON DISPOSITION PRACTICES AND DISPOSAL COSTS

5.5.1 Disposition Practices

As stated earlier, patrons generally support recycling efforts and want to recycle. Cities, towns and counties have made recycling paper and cardboard products accessible by setting up collection centers and distributing recycling bins to individual households. This pertains only to the cassette packaging.

The CMLS contractor currently gives cassettes returned in undeliverable USPS shipments to the Boy Scouts of America. The Boy Scouts then reuse the cassettes by recording over them. The total number of cassettes presently reused in this manner is 11,600 per year.

There is also an Agreement to Recycle Obsolete Government Property between NLS and a Texas company. However, as of early October, 1995, the Texas company had not started to accept shipments. This agreement is for book cassettes.

There are currently no nationwide disposal programs in place for cassettes. Economic considerations prohibit a recycler from accepting single or small shipments, and all of the potential recyclers contacted requested volumes of 100,000 or more cassettes annually. A central location, or locations, would therefore have to be established in order to recycle cassettes with the potential recyclers found in the American Plastics Council (APC) database.

Environmental issues associated with the post-patron disposition of audio cassettes are further discussed in Appendix 5-5.

5.5.2 Disposal Costs

In initially determining landfill costs associated with audio cassettes, it was assumed that no cassettes would be reused or recycled. Reference Section 3.6.2, for the national average cost for landfill waste, labor costs, and hauling fees. Exhibit 5-D below shows the annual costs associated with landfill disposal of audio cassettes and packaging for the one-way cassette option, which are also detailed in Appendix 5-6. Landfill disposal costs for the reusable cassette option were also subsequently calculated, and appear in Appendix 5-7.

Exhibit 5-D
TOTAL ANNUAL LANDFILL DISPOSAL COST
FOR AUDIO CASSETTES AND PACKAGING

ITEM	NO. OF UNRECYCLED/UNUSED UNITS GENERATED ANNUALLY	UNIT WEIGHT (GRAMS)	TOTAL WEIGHT (TONS)	TOTAL LANDFILL DISPOSAL COST @ $38/TON
Audio Cassettes	4,063,500	27	121	$4,598
Kraft Envelope	3,285,700	6	22	$ 836
GRAND TOTAL				$5,435

5.6 ONE-WAY VS REUSABLE CASSETTE OPTION COMPARISONS

5.6.1 Summary of Comparative Costs

A recap of the annual direct (impact on NLS budget) and indirect (off-budget) costs that would vary by cassette option is presented in Exhibit 5-E below. Narration costs, machine costs, and CMLS costs would not vary by one-way or reusable option, and have therefore been excluded from this comparison.

Exhibit 5-E
COMPARATIVE ANNUAL COST OF ONE-WAY AND REUSABLE CASSETTE OPTIONS(Magazines Only)

Cost Element	One-Way Cassettes	Reusable Cassettes	Cost Differential
Duplication/Shipping	$2,200,000	$3,080,000	$880,000
Free Mail	$1,800,000	$3,190,000	$1,390,000
Landfill Disposal	$4,600	$2,000	($2,600)
Total Cost	$4,005,000	$6,272,000	$2,267,000
Percent of Total	100.0%	157%	*57%*

All of the above cost elements have been previously described and quantified in the study report. As noted, the reusable cassette option would be 57% more costly to the NLS and USPS combined than the one-way cassette option, and the cost differential would be $2,267,000 per year.

5.6.2 Option Recommendation

We recommend that the NLS adopt the one-way, disposable, out-of-shell duplication cassette format for the formative magazine conversion program if any implementation proceeds. We also recommend that a maximum load of 400 minutes be used initially. Finally, we recommend that some consideration be given to title consolidation for those title pairs that are economical to produce, i.e. they have an identical frequency of issue, average durations that are favorable for consolidation, and some or significant overlapping readership. Appendix 5-8 presents costs for a production scenario whereby four title pairs are produced; these consolidations are seen to reduce total annual costs by approximately $20,000.

5.7 SIMPLE MICROCOMPUTER-BASED ECONOMIC MODEL

An economic, microcomputer-based model is being provided to the NLS to make simplified trials of different cost-related strategies for the magazine program. The model was developed in Lotus 123 Version 5 for Windows, and will easily facilitate the types of what-if analyses that the NLS will want to explore vis-a-vis planning for the transition, and generally for future operations.

The model will be oriented by title, and will include present and pro forma narration and duplication/shipping costs, frequency of issue, read time per issue, the number of subscriptions, and other fundamental data. The user will be able to change variables and parameters that impact cost and workload, and determine their incremental effect. One primary model output will be the costs/savings that would be realized by converting the specific title queried, and the increased costs that would be incurred to accommodate a specified increase in the readership.

Section 6

TRANSITION FEASIBILITY ANALYSIS

6.1 PRO FORMA COST INCREASE/SAVINGS FROM CONVERSION

This subsection compares the present direct and indirect costs for FD magazines with pro forma costs for the one-way, 400-minute maximum load cassette option, on an annual basis.

6.1.1 Summary of Comparative Costs

A recap of the annual direct and indirect costs that would vary by format is presented in Exhibit 6-A below. Narration costs and CMLS costs would not vary by format, and have therefore been excluded from the tabulation.

Exhibit 6-A
COMPARATIVE ANNUAL MAGAZINE COST
DISC FORMAT AND CASSETTE FORMAT

Cost Element	Disc Format	Cassette Format	Cost Differential
Duplication/Shipping	$2,075,000	$2,200,000	$125,000
Free Mail	$2,434,000	$1,800,000	($634,000)
Environmental	$9,000	$4,600	($4,400)
Playback Machines	$885,000	$944,000	$59,000
Total Costs	$5,403,000	$4,949,000	***($454,400)***
Percent of Total	100.0%	***92%***	***8%***

The cost figures shown are for all 43 titles published, and costs of the individual titles are available elsewhere in the study report. As noted, the cassette magazine format would be 8% less expensive than maintaining the disc magazine format for all parties concerned, and the pro forma

81

annual savings from conversion would be $454,000. As noted above, the duplication costs by themselves would increase approximately 6%.

6.2 IMPACT ON THE SUPPLY OF PLAYBACK EQUIPMENT

Making additional CBMs available has emerged as a key-cost issue, and a major constraint on any transition strategies that may be pursued. Special attention has therefore been given to defining the actual number of machines required, and to developing alternative ways that this demand could be accommodated.

6.2.1 Required Availability of CBMs for Patrons Having only TBMs

Selected RLs were polled to determine how many of their magazine patrons have only TBMs and how many of their disc TBT-only patrons have only TBMs. The results of this sampling were then projected to cover 100% of the national magazine readership, and 100% of the TBT disc readership (Appendix 6-1).

As noted, the total magazine readership is 52,100 patrons. New or repaired CBMs would be needed by 4,140 patrons to complete the conversion of all 43 magazines to cassette format, and an additional 4,759 new or repaired CBMs would be needed by patrons for full conversion of disc TBT to cassette format (Ref. Appendix 6-1).

6.2.2 Present Availability of Unassigned CBMs

The inventory of unassigned CBMs in the network as of 30 September 1995 is shown in Exhibit 6-B below.

Exhibit 6-B
INVENTORY OF UNASSIGNED CBMS BY LOCATION
AS OF 30 SEPTEMBER 1995

Machine Model	In RL Custody	In MSC Custody	Total	% of Total
C76/C80	13,300	4,000	17,300	21.6
C-1	39,310	410	39,720	49.6
C-2	350	--	350	.4
E-1	1,940	7,560	9,500	11.9
CT-1	1,390	11,870	13,260	16.5
Total Machines	56,290	23,840	80,130	100.0
Percent of Total	70.2%	29.8%	100.0%	

As noted, the unassigned inventory of CBMs was 80,130 machines. Seventy percent of this inventory was in RL custody, and thirty percent was in MSC custody.

6.2.3 Potential Cost of Repairing Unassigned C-1s

We believe that repaired machines are a plausible source of some or all of the CBMs that would be needed for conversion. The commercial repair contractor, if charged with repairing machines that would be earmarked for the conversion program, could be an important player in any transition strategies developed.

The current repair cost of $45 per machine was used for costing purposes. This cost consists of $29 per machine for labor, plus an estimated $16 per machine for parts supplied by the NLS. Using this unit cost, the 4,140 machines required for full conversion of the magazine program would have an availability (one-time) cost of $186,000; with FD TBT conversion included, this number is approximately twice as high.

6.2.4 Potential Cost of Utilizing Unassigned CT-1s.

As noted, there were 9,500 unassigned E-1s and 13,260 unassigned CT-1s in the network as of 30 September 1995. Either of these models could be assigned to some, but not all, of the patrons now having only TBMs. We believe that CT-1s are the better choice, as the transition from disc to cassette format would be less abrupt for the patrons involved, and suggest that any CT-1s so assigned have no batteries. There would be no incremental costs for utilizing these unassigned machines.

6.2.5 Potential Cost of Utilizing New C-1s or C-2s

At $235 per machine, the first cost of utilizing new CBMs for the magazine conversion program would be $975,000 (and approximately twice this if FD TBT were converted). This is certainly the most conservative assumption that can be made regarding one-time machine start-up requirements.

6.3 OTHER FACTORS AFFECTING A DECISION TO CONVERT

6.3.1 Patron Preferences

Patrons are believed to prefer cassettes over discs for magazines because cassettes and players are portable, and articles can be indexed for quick reference on cassettes. However, some older patrons prefer discs. On balance, we believe that patron preference for conversion will be highly favorable, and that the demand for magazines will increase.

6.3.2 Political Implications of Cassette Disposal

The political implication of disposing of some 4,000,000 cassettes per year has been identified as an item of concern, based in part on past experience of unfavorable press publicity.

However, the disposal of individual cassettes by patrons would be widely dispersed, both timewise and geographically. In essence, they will become part of the household garbage waste stream. If singled out, there will be no identification on a cassette that indicates it was once government property.

6.4 TRANSITION RECOMMENDATION

We recommend that the NLS convert the magazine program to cassette format. The costs of cassette duplication are so close, and in some cases lower (on a title-by-title basis), to those of FD magazines that any difference in cost is well worth the additional marginal utility to be gained by patrons nationwide. A one-way, disposable, initially 400-minute maximum load, cut-to-length, out-of-shell duplicated product is the recommended option to implement. We recommend that the program be converted in entirety, but not all 43 titles in one year's time, and not with a single vendor being the sole-source supplier. Concerns regarding playback machines, we believe, are indicative of the overall situation faced by NLS and the network, and that the incremental load placed upon the system by a phased conversion will not be significant.

Section 7

TRANSITION PLAN

7.1 CRITERIA FOR CHOOSING THE SEQUENCE OF TITLE CONVERSION

The sequence of title conversion will depend upon what objectives the NLS opts to pursue. Both the need for funding and the availability of funding must be weighted in making these determinations.

7.1.1 Need for Funding

Possible needs for funding have been previously identified in Section 1.2.5, and include: planning and executing the conversion protocol; making the necessary CBMs available; changes in the CMLS logic and database; and, possibly subsidizing some titles whose conversion from FD to cassette does not prove to be cost-effective.

7.1.2 Availability of Funding

The necessary funds could come from additions to and/or reallocations within the budget, which would be available immediately, or from internally generated cost economies, which would not be available immediately.

7.2 STRATEGIES FOR PHASING-IN THE NEW SYSTEM

7.2.1 Present FD Magazine Contract Duration

The disc contractor is now in the second year of a 2-year contract, and the time before contract renewal for FY1997 is less than nine months away. Within this time frame, the titles to be first converted to cassette format could be batched as a separate disc solicitation, with terms that give the NLS the right to cancel on a title-by-title basis. A parallel solicitation for the same titles could cover the title-by-title start-up of cassette conversion.

7.2.2 Phase-in Option #1: Convert Titles With the Least Number of Subscribers First

The objective of this strategy is to minimize the initial disruption to on-going operations while converting a substantial number of titles. Titles with the least number of subscribers would therefore be converted first.

The ten (10) titles with the least number of subscribers are listed in Exhibit 7-A. As noted, these titles represent 6.8% of all subscriptions, but are read by 15.6% of the readership and constitute 23% of all titles offered. Only 646 additional CBMs would be needed to make this partial conversion, and only 646 subscribers would be affected by the equipment change. This should make Phase-in Option #1 comparatively easy to implement.

As these 10 titles have the least number of subscribers, their conversion would have a minimal effect on increased magazine demand. But this conversion sequence would generate savings in duplication/shipping costs of only $29,000 (Exhibit 7-B).

Exhibit 7-A

OPTION 1- SUBSCRIPTION PROFILE OF 10 TITLES WITH LOWEST NUMBER OF SUBSCRIPTIONS

MAGAZINE TITLE	Subscriptions Per Issue*	Cumulative Subscriptions	Incremental Subscribers Per Issue*	Cumulative Incremental Subscribers	Percent of Cum. Incremental Subscribers to Cum. Subscriptions
JOURNAL FRANCAIS D'AMERIQUE	296	296	296	296	100.0%
BESTE AUS READERS DIGEST	300	596	262	558	93.6%
BUENHOGAR	743	1,339	687	1,245	93.0%
SELECCIONES DEL READERS DIGEST	1,132	2,471	513	1,758	71.1%
SOCIAL WORK	1,255	3,726	1,148	2,906	78.0%
MUSICAL MAINSTREAM - FD	1,373	5,099	1,148	4,054	79.5%
NATION	1,420	6,519	1,096	5,150	79.0%
JOURNAL OF COUNSELING & DEV.	1,458	7,977	662	5,812	72.9%
HISTORIC PRESERVATION	1,613	9,590	1,087	6,899	71.9%
QST	1,627	11,217	1,240	8,139	72.6%
PERCENT OF ALL MAGAZINES		6.8%		15.6%	
TOTAL OF ALL MAGAZINES (EXCLUDING TBT)	164,901	164,901	52,111	52,111	

Subsciber Base as of August 18, 1995

Exhibit 7-B

OPTION 1 - COST PROFILE OF 10 TITLES WITH LOWEST NUMBER OF SUBSCRIPTIONS

MAGAZINE TITLE	Narration Cost Per Copy	Narration Cost Per Year	Current Duplication Cost Per Copy	Current Duplication Cost Per Year	Narration & Duplication Cost Per Copy	Narration & Duplication Cost Per Year	Pro Forma Cassette Duplication Expected Cost/Copy	Pro Forma Cassette Duplication Expected Cost/Year	Pro Forma Narration & Duplication Expected Cost/Copy	Pro Forma Narration & Duplication Expected Cost/Year
JOURNAL FRANCAIS D'AMERIQUE	$1.921	$13,076	$2.43	$16,556	$4.352	$29,631	$1.24	$8,437	$3.16	$21,512
BESTE AUS READERS DIGEST	$4.502	$16,099	$3.31	$11,820	$7.807	$27,919	$1.67	$5,979	$6.17	$22,078
BUENHOGAR	$1.521	$13,448	$1.63	$14,428	$3.152	$27,876	$1.10	$9,694	$2.62	$23,142
SELECCIONES DEL READERS DIGEST	$1.620	$21,988	$1.58	$21,422	$3.198	$43,410	$1.53	$20,740	$3.15	$42,728
SOCIAL WORK	$2.356	$17,515	$1.05	$7,837	$3.410	$25,352	$1.82	$13,564	$4.18	$31,079
MUSICAL MAINSTREAM	$0.500	$2,699	$0.82	$4,452	$1.324	$7,151	$1.19	$6,423	$1.69	$9,122
JOURNAL OF COUNSELING & DEV.	$2.669	$22,261	$2.58	$21,517	$5.249	$43,778	$2.32	$19,363	$4.99	$41,624
NATION	$0.545	$35,738	$0.81	$53,043	$1.355	$88,781	$0.67	$43,939	$1.22	$79,677
QST	$1.785	$36,341	$1.78	$36,313	$3.568	$72,654	$1.53	$31,201	$3.32	$67,542
HISTORIC PRESERVATION	$0.751	$7,682	$1.10	$11,208	$1.848	$18,890	$1.02	$10,413	$1.77	$18,095
SUBTOTAL		$186,847		$198,596		$385,443		$169,752		$356,599
PERCENT OF TOTAL		23.1%		9.6%		13.4%		7.7%		11.8%
TOTAL MAGAZINES EXCLUDING TBT		$809,389		$2,075,583		$2,884,972		$2,211,521		$3,020,910

Subscriber base - FY95/FY96 contract.

7.2.3 Phase-in Option #2: Publish Titles With the Greatest Number of Subscribers in Both Disc and Cassette Format

The objective of this strategy is to reach the maximum number of subscribers first, while minimizing the number of additional CBMs required. These titles would therefore have to be published in both disc and cassette format, with TBM-only patrons receiving FD copies.

The ten (10) titles with the greatest number of subscribers are listed in Exhibit 7-C. As noted, these titles represent 53.1% of all subscriptions, and are read by 80.6% of the readership. No additional CBMs would be needed to make this partial conversion, but 42,000 subscribers would have to be alerted to the change.

With this strategy, the number of magazine subscriptions could quickly accelerate. However, a sub-strategy could be to publish only one title in both disc and cassette format. For example, 5,250 copies of National Geographic magazine could be produced on disc, and 9,400 copies could be converted to cassette. A weekly or monthly tally would then be kept of the change in magazine readership in each format, and the overall increase in readership, if any. The potential increase in magazine demand from conversion to cassette format could thereby be measured before any further title conversion is initiated.

Disc production costs with this strategy woud probably increase, but disc run size would still compare favorably with present average run size. An increase in disc cost could possibly be offset by savings in cassette costs, particularly if only one title is selected for conversion.

Exhibit 7-C

OPTION 2-SUBSCRIPTION PROFILE OF 10 TITLES WITH HIGHEST NUMBER OF SUBSCRIPTIONS

MAGAZINE TITLE	Subscriptions Per Issue*	Cumulative Subscriptions	Incremental Subscribers Per Issue*	Cumulative Incremental Subscribers	Percent of Cum. Incremental Subscribers to Cum. Subscriptions
NATIONAL GEOGRAPHIC	13,788	13,788	13,788	13,788	100.0%
GOOD HOUSEKEEPING	12,914	26,702	9,659	23,447	87.8%
US NEWS AND WORLD REPORT	11,564	38,266	6,143	29,590	77.3%
PREVENTION	9,860	48,126	3,343	32,933	68.4%
ELLERY QUEENS MYSTERY MAGAZINE	8,882	57,008	3,232	36,165	63.4%
CONSUMER REPORTS	8,058	65,066	1,852	38,017	58.4%
KIPLINGER'S PERSONAL FINANCE MAGAZIN	5,848	70,914	968	38,985	55.0%
SPORTS ILLUSTRATED	5,629	76,543	1,819	40,804	53.3%
MAGAZINE OF THE MONTH	5,505	82,048	632	41,436	50.5%
MONEY	5,499	87,547	588	42,024	48.0%
PERCENT OF ALL MAGAZINES		53.1%		80.6%	
TOTAL OF ALL MAGAZINES (EXCLUDING TBT)		164,901		52,111	

Subscriber base as of August 18, 1995.

7.2.4 Phase-in Option #3: Convert Titles with the Greatest Percentage Savings First

The objective of this strategy is to minimize the financial risk of conversion while converting a substantial number of titles. Titles with the most favorable production cost margins, not necessarily those exhibiting the greatest dollar savings, would therefore be converted first.

The ten (10) titles with the greatest percentage savings potential are listed in Exhibit 7-D. This strategy would minimize the financial risk of conversion, but would require a greater initial investment in new or reconditioned CBMs than would be the case for Phase-in Option #1. The pro forma savings in duplication/shipping costs are $71,000. Exhibit 7-E shows an analysis of the conversion of the 10 titles with the greatest cost savings on an absolute rather than a relative basis, where there is more inherent risk that the savings may not be achieved.

7.2.5 Phase-in Option #4: Convert Titles Whose Narration Would be Outsourced First

This strategy would initiate an action plan to make a major reduction in narration costs by pre-qualifying existing commercial recording studios as narrators. The ten (10) titles selected would be those that are the easiest to narrate. These tities would first have to be unbundled from the duplicator contract.

7.2.6 Phase-in Option #5: Combinations of Options #1, #2, #3, and #4

Some titles will appear under more than one option, and this should be interpreted as increasing their prospect for early conversion.

Exhibit 7-D

OPTION 3 - COST PROFILE OF 10 TITLES WITH GREATEST PERCENTAGE COST SAVINGS

MAGAZINE TITLE	Narration Cost Per Copy	Narration Cost Per Year	Current Duplication Cost Per Copy	Current Duplication Cost Per Year	Narration & Duplication Cost Per Copy	Narration & Duplication Cost Per Year	Pro Forma Cassette Duplication Expected Cost/Copy	Pro Forma Cassette Duplication Expected Cost/Year	Pro Forma Narration & Duplication Expected Cost/Copy	Pro Forma Narration & Duplication Expected Cost/Year	Percent Pro Forma Duplication to Current
BESTE AUS READERS DIGEST	$4.502	$16,099	$3.31	$11,820	$7.807	$27,919	$1.67	$5,979	$6.17	$22,078	50.6%
JOURNAL FRANCAIS D'AMERIQUE	$1.921	$13,076	$2.43	$16,556	$4.352	$29,631	$1.24	$8,437	$3.16	$21,512	51.0%
BUENHOGAR	$1.521	$13,448	$1.63	$14,428	$3.152	$27,876	$1.10	$9,694	$2.62	$23,142	67.2%
STEREO REVIEW	$0.811	$19,190	$1.17	$27,800	$1.986	$46,991	$0.89	$21,156	$1.70	$40,346	76.1%
NATION	$0.545	$35,738	$0.81	$53,043	$1.355	$88,781	$0.67	$43,939	$1.22	$79,677	82.8%
OUTDOOR LIFE	$0.475	$19,403	$0.92	$37,433	$1.390	$56,836	$0.77	$31,450	$1.24	$50,852	84.0%
NATIONAL REVIEW	$0.543	$33,321	$0.84	$51,626	$1.385	$84,947	$0.72	$43,881	$1.26	$77,203	85.0%
BOOK WORLD	$0.389	$33,859	$0.74	$64,172	$1.126	$98,031	$0.63	$54,683	$1.02	$88,542	85.2%
QST	$1.785	$36,341	$1.78	$36,313	$3.568	$72,654	$1.53	$31,201	$3.32	$67,542	85.9%
KIPLINGER'S PERSONAL FINANCE MAGAZIN	$0.275	$21,186	$0.80	$61,882	$1.079	$83,068	$0.70	$53,694	$0.97	$74,880	86.8%
SUBTOTAL		$241,660		$375,074		$616,735		$304,113		$545,773	
PERCENT OF TOTAL		29.9%		18.1%		21.4%		13.8%		18.1%	
TOTAL MAGAZINES EXCLUDING TBT		$809,389		$2,075,583		$2,884,972		$2,211,521		$3,020,910	

Subscriber base - FY95/FY96 contract.

BEST COPY AVAILABLE

Exhibit 7-E

COST PROFILE OF 10 TITLES WITH GREATEST EXPECTED COST SAVINGS

MAGAZINE TITLE	Narration Cost Per Copy	Narration Cost Per Year	Current Duplication Cost Per Copy	Current Duplication Cost Per Year	Narration & Duplication Cost Per Copy	Narration & Duplication Cost Per Year	Pro Forma Cassette Duplication Expected Cost/Copy	Pro Forma Cassette Duplication Expected Cost/Year	Pro Forma Narration & Duplication Expected Cost/Copy	Pro Forma Narration & Duplication Expected Cost/Year	Savings Pro Forma Duplication to Current
US NEWS AND WORLD REPORT	$0.084	$52,440	$0.65	$405,625	$0.733	$458,065	$0.57	$356,047	$0.65	$408,487	$49,578
ELLERY QUEENS MYSTERY MAGAZINE	$0.182	$22,270	$0.75	$91,122	$0.928	$113,392	$0.66	$81,062	$0.85	$103,331	$10,060
BOOK WORLD	$0.389	$33,859	$0.74	$64,172	$1.126	$98,031	$0.63	$54,683	$1.02	$88,542	$9,489
NATION	$0.545	$35,738	$0.81	$53,043	$1.355	$88,781	$0.67	$43,939	$1.22	$79,677	$9,104
KIPLINGER'S PERSONAL FINANCE MAGAZIN	$0.275	$21,186	$0.80	$61,882	$1.079	$83,068	$0.70	$53,694	$0.97	$74,880	$8,188
JOURNAL FRANCAIS D'AMERIQUE	$1.921	$13,076	$2.43	$16,556	$4.352	$29,631	$1.24	$8,437	$3.16	$21,512	$8,119
NATIONAL REVIEW	$0.543	$33,321	$0.84	$51,626	$1.385	$84,947	$0.72	$43,881	$1.26	$77,203	$7,745
STEREO REVIEW	$0.811	$19,190	$1.17	$27,800	$1.986	$46,991	$0.89	$21,156	$1.70	$40,346	$6,645
OUTDOOR LIFE	$0.475	$19,403	$0.92	$37,433	$1.390	$56,836	$0.77	$31,450	$1.24	$50,852	$5,984
BESTE AUS READERS DIGEST	$4.502	$16,099	$3.31	$11,820	$7.807	$27,919	$1.67	$5,979	$6.17	$22,078	$5,841
SUBTOTAL		$266,581		$821,080		$1,087,661		$700,327		$966,908	$120,753
PERCENT OF TOTAL		32.9%		39.6%		37.7%		31.7%		32.0%	
TOTAL MAGAZINES EXCLUDING TBT		$809,389		$2,075,583		$2,884,972		$2,211,521		$3,020,910	

Subscriber base - FY95/FY96 contract.

7.2.7 Subsequent Phase-in Options

All of the phase-in options identified have consisted of ten (10) titles each. Prior to completion of the options, the conversion scenario should be revisited to assess the problems encountered and how well the established objectives have been realized. A new selection of titles for conversion for the next fiscal year can then be made in an informed manner.

7.3 PROJECTED COSTS DURING TRANSITION

7.3.1 Impact of a Decline in FD Volume on Disc Costs

As noted, Phase-in Option #1 would convert titles with the smallest subscriber base first. These titles would have the smallest production runs, which have the highest per copy costs, but represent only 10% of total current costs and 8% of pro forma costs. Our impression is that the disc contractor would be pleased to be relieved of them. This title conversion sequence should therefore have minimal, if any, effect on the production costs of those titles remaining in disc format. There would therefore be no critical point when disc costs would rise.

7.4 OTHER TRANSITION ISSUES

7.4.1 Prepare New Technical Specifications for Magazine Cassettes

The technical specifications that will be utilized in the NLS/LOC procurement and Q.C. monitoring processes must be completed early in the transition planning processes. The major tasks that must be performed are as follows:

- Procure and test sample cassettes (including longer loads in playback machines), labels and packaging materials,
- Finalize functional design requirements, and

- Prepare draft and final technical specifications.

7.4.2 Make Required Changes in CMLS

Modify the network library interface for subscription records, particularly for those titles that will be consolidated as one issue.

Modify the label program to provide address labels to producers that are compatible with automation of the packaging and shipping processes.

7.4.3 Consider Possible Changes in the Bidding and Pricing Processes

Bids should be solicited on groups of titles, rather than individual titles, so as to make the bid quantities worthwhile to duplicators, and to minimize the risk of a duplicator being awarded only one low-volume title to produce. This strategy would be particularly appropriate for the titles in Phase-in Options #1 and #4.

Provide for quoting both fixed costs per issue and variable costs, to insure that actual narrator and duplicator costs are properly reflected in their pricing. This policy can be most easily implemented by including detailed bid forms and bidding instructions with a solicitation.

7.4.4 Communication to Patrons and Network Re Change of Media

Describe the general conversion protocol and/or the issue-by-issue protocol required.

Determine when best to screen magazine readers for CBM availability - before or after converting specific titles.

Rationalize if patron communication should be through the network libraries, or directly from the NLS through CMLS.

Appendix 1-1

Subscription Profile of Audio Magazine Program

NUMBER OF SUBSCRIPTIONS PER SUBSCRIBER	NUMBER OF SUBSCRIBERS	NUMBER OF SUBSCRIPTIONS
1	110,561	110,561
2	15,064	30,128
3	9,156	27,468
4	5,577	22,308
5	3,618	18,090
6	2,372	14,232
7	1,679	11,753
8	1,195	9,560
9	840	7,560
10	614	6,140
11	452	4,972
12	354	4,248
13	262	3,406
14	206	2,884
15	193	2,895
16	121	1,936
17	104	1,768
18	74	1,332
19	64	1,216
20	49	980
21	39	819
22	39	858
23	26	598
24	28	672
25	28	700
26	18	468
27	12	324
28	16	448
29	15	435
30	15	450
31	6	186
32	5	160
33	10	330
34	8	272
35	6	210
36	14	504
37	6	222
38	7	266
39	6	234
40	5	200
41	9	369
42	3	126
43	2	86
44	0	0
45	1	45
TOTAL MAGAZINES & TBT	152,879	292,419
TBT- Cassette Only	79,696	
TBT - FD Only	20,572	
TBT - Cassette & FD Only	500	
Subtotal - TBT Only	100,768	
FD Magazines & TBT-Cassette	12,703	
FD Magazines & TBT-FD	12,403	
FD Mags. & TBT-FD & TBT-Cass	572	
FD Magazines Only - No TBT	26,433	
Subtotal - Magazines	52,111	

As of August 18, 1995

Appendix 1-2

CBM and TBM Demand and Availability Seven-Year Trend

MODEL	MODEL STATUS	STATUS	END FY89	END FY90	END FY91	END FY92	END FY93	END FY94	END FY95
CBM	CBM-AVAILABLE	AVAILABLE	69,634	91,718	68,953	64,103	59,510	48,020	43,477
CBM	CBM-ASSIGNED	ASSIGNED	427,154	442,008	457,373	474,017	489,452	517,528	532,419
CBM	CBM-IN REPAIR	IN-REPAIR	57,421	39,148	47,739	33,140	32,705	39,804	36,652
CBM	CBM-WORKING	UNASSIGNED	127,055	130,866	116,692	97,243	92,215	87,824	80,129
TBM	TBM-AVAILABLE	AVAILABLE	30,728	22,892	21,645	16,841	16,804	21,553	27,058
TBM	TBM-ASSIGNED	ASSIGNED	221,708	209,570	183,145	172,436	151,166	141,155	127,967
TBM	TBM-IN REPAIR	IN-REPAIR	12,344	10,045	9,047	7,415	4,863	4,978	4,102
TBM	TBM-WORKING	UNASSIGNED	43,072	32,937	30,692	24,256	21,667	26,531	31,160
E-1	E-1-AVAILABLE	AVAILABLE	26,043	22,631	19,973	15,688	10,005	5,350	8,655
E-1	E-1-ASSIGNED	ASSIGNED	10,901	13,749	16,272	19,799	22,966	26,044	26,236
E-1	E-1-IN REPAIR	IN-REPAIR	672	1,154	2,259	2,638	4,427	5,749	844
E-1	E-1-WORKING	UNASSIGNED	26,715	23,785	22,232	18,326	14,432	11,099	9,499
CT-1	CT-1-AVAILABLE	AVAILABLE	61	67	122	189	8,570	14,456	12,997
CT-1	CT-1-ASSIGNED	ASSIGNED	31	75	534	617	1,304	2,941	4,147
CT-1	CT-1-IN REPAIR	IN-REPAIR	2	5	13	32	100	270	260
CT-1	CT-1-WORKING	UNASSIGNED	63	72	135	221	8,670	14,726	13,257
CBMN*	CBMN-AVAILABLE	AVAILABLE	43,530	69,020	48,858	48,226	40,935	28,214	21,825
CBMN*	CBMN-ASSIGNED	ASSIGNED	416,222	428,184	440,567	453,601	465,182	488,543	502,036
CBMN*	CBMN-IN REPAIR	IN-REPAIR	56,747	37,989	45,467	30,470	28,178	33,785	35,548
CBMN*	CBMN-WORKING	UNASSIGNED	100,277	107,009	94,325	78,696	69,113	61,999	57,373

* - CBMs net of E-1s and CT-1s

Appendix 1-3

Cassette and Talking Book Readership and Circulation, FY88-FY94

	CASSETTE	CASSETTE	CASSETTE	DISC	DISC	DISC	CASSETTE	CASSETTE	CASSETTE	CASSETTE	DISC	DISC	DISC	DISC
YEAR	IND. RDS.	DEP.COL.	TOT.RDS.*	IND.RDS.	DEP.COL.	TOT.RDS.*	IND.circ	DEP.circ	ILL.circ	TOT.circ	IND.circ	DEP.circ	ILL.circ	TOT.circ
1988	334,990	21,072	419,278	208,170	15,115	268,630	10,325,200	429,420	184,950	10,939,570	3,422,230	142,100	56,180	3,620,510
1989	347,200	21,522	433,288	199,430	14,680	258,150	11,587,000	440,100	125,500	12,152,600	2,751,000	114,450	24,210	2,889,660
1990	354,830	21,581	441,154	181,480	13,212	234,328	12,353,200	440,700	153,190	12,947,090	2,091,800	92,510	24,960	2,209,270
1991	369,197	21,971	457,081	160,731	11,616	207,195	13,618,300	514,200	159,890	14,292,390	1,807,950	84,840	24,110	1,916,900
1992	383,008	23,073	475,300	147,254	10,992	191,222	14,074,700	560,450	177,130	14,812,280	1,383,950	71,530	19,130	1,474,610
1993	396,065	23,864	491,521	139,724	10,123	180,216	15,198,700	595,550	212,120	16,006,370	1,260,830	62,716	16,450	1,339,996
1994	417,360	24,713	516,212	127,587	9,276	164,691	16,179,900	643,600	220,800	17,044,300	1,014,430	58,095	13,734	1,086,259

* - Total readership count assumes four readers per deposit collection.

Appendix 1-4

FD Magazine and Talking Book Topics Subscriptions - Start of FYs 1989 - 1995

Magazine Title	Code	Start of FY89	Start of FY90	Start of FY91	Start of FY92	Start of FY93	Start of FY94	Start of FY95
American Heritage	AMH4	7,178	7,400	7,248	6,947	5,118	5,287	5,261
Analog	ANA4	3,512	3,400	3,392	3,395	2,827	3,094	3,074
Atlantic Monthly	AMO4	5,124	4,900	4,794	4,677	3,452	3,712	3,664
Beste Aus Readers Digest	BRD4	400	400	400	404	316	313	298
Book World	BKW4	2,028	2,100	2,076	2,058	1,488	1,788	1,674
Buenhogar	BUE4	582	600	656	746	664	804	737
Childrens Magazine Program	CMP4	4,200	4,316	4,318	3,200	3,200	3,187	3,153
Civilization	CIV4							2,000
Consumer Reports	CRP4	9,570	9,600	10,174	10,094	7,796	8,490	8,224
Contemporary Soundtrack	XST4	3,170	3,100	2,943	2,838	2,093	1,852	1,862
Ebony	EBN4	3,574	3,500	3,597	3,540	2,971	3,065	3,092
Ellery Queens Mystery Magazine	EQM4	13,083	12,600	12,619	12,252	9,230	9,564	9,401
Encore	ECR4	2,652	2,600	2,539	2,502	1,827	1,768	1,828
Farm Journal	FMJ4	2,738	2,600	2,636	2,634	1,929	1,924	1,929
Foreign Affairs	FAF4	2,800	3,000	3,139	3,059	2,294	2,628	2,406
Good Housekeeping	GHK4	19,587	18,800	18,727	18,113	13,732	14,051	13,758
Harper's	HRP4	4,882	4,600	4,550	4,380	3,240	3,230	3,197
Historic Preservation	HPR4	2,572	2,500	2,532	2,489	1,819	1,679	1,704
Journal Francais d'Amerique	JFA4	282	330	335	345	272	353	296
Journal of Counseling & Dev.	JCD4	1,352	1,500	1,516	1,594	1,244	1,312	1,390
Kiplinger's Personal Finance Magazine	KPF4	11,000	10,300	10,117	9,626	6,902	6,414	6,414
Magazine of the Month	MOM4	6,825	7,100	7,265	7,122	5,278	5,569	5,314
Money	MNY4	6,855	6,300	6,430	6,534	5,182	5,666	5,618
Musical Mainstream	XMM4	2,318	2,200	2,165	2,047	1,502	1,300	1,350
Nation	NAT4	950	1,100	1,257	1,323	1,183	1,415	1,394
National Geographic	NGG4	21,772	20,300	20,424	19,832	14,551	14,901	14,648
National Geographic World	NGW4	4,032	3,500	3,609	3,604	2,726	2,836	2,842
National Review	NRV4	2,692	2,700	2,688	2,692	2,164	2,546	2,454
Natural History	NHY4	4,735	4,700	4,700	4,588	3,368	3,489	3,469
New Choices	NCO4	7,395	7,200	6,899	6,589	4,545	4,178	3,967
New York Times	NYT4	5,703	5,600	5,569	5,496	4,229	4,656	4,515
Outdoor Life	OTL4	4,530	4,200	4,473	4,403	3,295	3,440	3,407
Prevention	PVN4	12,370	11,800	12,097	11,886	9,624	9,940	10,125
QST	QST4	1,889	1,800	1,901	1,897	1,645	1,723	1,697
Quarterly Music Magazine	QMM4	3,807	2,900	2,791	2,617	2,557	2,542	2,542
Reader's Digest	SRD4	1,000	1,000	1,121	1,219	1,082	1,202	1,131
Social Work	SWK4	1,357	1,400	1,434	1,440	1,105	1,174	1,239
Sports Illustrated	SPI4	7,220	7,000	7,356	7,222	5,462	5,783	5,832
Stereo Review	STR4	3,275	2,700	2,782	2,658	1,922	1,956	1,972
Travel/Holiday	THY4	5,226	4,600	4,617	4,448	3,217	3,282	3,223
True West	TWT4	7,509	7,000	6,903	6,741	5,002	5,140	5,157
U.S. News & World Report	UNW4	16,600	16,600	15,795	15,800	13,000	12,800	12,500
Writer	WRT4	2,179	2,100	2,200	2,162	1,781	1,951	1,954
Total Magazine Subscriptions		230,525	221,946	222,784	217,213	166,834	172,004	171,712
TBT FD Sets - Regular	TBT4	142,345	124,000	85,000	63,000	52,000	50,000	47,000
TBT FD Sets for BBR	TBT4	11,000	10,300	10,300	10,000	10,000	10,000	10,630
TBT FD Subtotal	TBT4	153,345	134,300	95,300	73,000	62,000	60,000	57,000
TBT Cassette Subtotal	TBT3	20,000	30,000	100,000	100,000	100,000	100,000	100,000
TBT Subtotal		173,345	164,300	195,300	173,000	162,000	160,000	157,000
Grand Total		403,870	386,246	418,084	390,213	328,834	332,004	328,712

Appendix 1-5

Analysis of Current and Pro Forma Playback Equipment Usage

Average Book Length (CB or TB)	11.15	hours			
FY94 TB Circulation-Individual	1,014,430	books	11,310,895	TBM hours	41.2%
FY94 TB Circulation-Dep.Coll.	58,095	books	647,759	TBM hours	2.4%
FY94 TB Circulation-ILL	13,734	books	153,134	TBM hours	0.6%
FY94 TB Circulation-Total	1,086,259	books	12,111,788	TBM hours	44.1%
Current 12-Mon. Avg. FD Magazines			14,005,317	TBM hours	51.0%
Current 12-Mon. Avg. TBT-FD			1,344,000	TBM hours	4.9%
Current 12-Mon. Avg. FD Mags.& TBT			15,349,317	TBM hours	55.9%
Total Current Annual TBM Usage			27,461,105	TBM hours	100.0%
FY94 CB Circulation-Individual	16,179,900	books	180,405,885	CBM hours	93.7%
FY94 CB Circulation-Dep.Coll.	643,600	books	7,176,140	CBM hours	3.7%
FY94 CB Circulation-ILL	220,800	books	2,461,920	CBM hours	1.3%
FY94 CB Circulation-Total	17,044,300	books	190,043,945	CBM hours	98.8%
Current 12-Mon. Avg. TBT-Cassette			2,400,000	CBM hours	1.2%
Total Current Annual CBM Usage			192,443,945	CBM hours	100.0%
Est. Annual Increase if FDs Converted			15,349,317	CBM hours	8.0%
Estimated Future Annual CBM Usage			207,793,262	CBM hours	

Analyses assume a book, magazine, or TBT is read once in entirety.

Appendix 2-1

ANNUAL MAGAZINE AND TBT WORKLOAD REQUIREMENTS

MAGAZINE TITLE	Issues per Year	Required Response Time Working Days	Required Response Time Calendar Days	Average Minutes Per Issue	Narrator Average Minutes Per Year	Duplicator Average Copies Per Issue	Duplicator Average Copies Per Year	Duplicator Average Discs Per Copy	Duplicator Average Discs Per Issue	Duplicator Average Discs Per Year	CMLS Labels Per Issue	CMLS Labels Per Year	USPS Packages Delivered Per Issue	USPS Packages Delivered Per Year	USPS Packages Returned Per Year	CMLS Returns Processed Per Year
AMERICAN HERITAGE	8	10	14	312	2,496	5,261	42,088	3	15,783	126,264	5,261	42,088	5,261	42,088	817	817
ANALOG	13	10	14	568	7,384	3,074	39,962	5	15,370	199,810	3,074	39,962	3,074	39,962	776	776
ATLANTIC MONTHLY	12	10	14	358	4,296	3,664	43,968	3	10,992	131,904	3,664	43,968	3,664	43,968	854	854
BESTE AUS READERS DIGEST	12	10	14	307	3,684	298	3,576	3	894	10,728	298	3,576	298	3,576	69	69
BOOK WORLD	52	4	7	149	7,748	1,674	87,048	2	3,348	174,096	1,674	87,048	1,674	87,048	1,690	1,690
BUENHOGAR	12	15	21	274	3,288	737	8,844	3	2,211	26,532	737	8,844	737	8,844	172	172
CHILDRENS MAGAZINE PROGRAM	12	10	14	72	864	3,153	37,836	2	6,306	75,672	3,153	37,836	3,153	37,836	735	735
CIVILIZATION	6	10	14	346	2,076	2,000	12,000	3	6,000	36,000	2,000	12,000	2,000	12,000	233	233
CONSUMER REPORTS	12	10	14	488	5,856	8,224	98,688	5	41,120	493,440	8,224	98,688	8,224	98,688	1,916	1,916
CONTEMPORARY SOUNDTRACK	6	22	28	177	1,062	1,862	11,172	2	3,724	22,344	1,862	11,172	1,862	11,172	217	217
EBONY	12	10	14	208	2,496	3,092	37,104	2	6,184	74,208	3,092	37,104	3,092	37,104	720	720
ELLERY QUEENS MYSTERY MAGAZINE	13	11	21	392	5,096	9,401	122,213	4	37,604	488,852	9,401	122,213	9,401	122,213	2,373	2,373
ENCORE	12	10	14	523	6,276	1,828	21,936	5	9,140	109,680	1,828	21,936	1,828	21,936	426	426
FARM JOURNAL	13	10	14	253	3,289	1,929	25,077	3	5,787	75,231	1,929	25,077	1,929	25,077	487	487
FOREIGN AFFAIRS	7	15	21	447	3,129	2,406	16,842	4	9,624	67,368	2,406	16,842	2,406	16,842	327	327
GOOD HOUSEKEEPING	12	11	21	554	6,648	13,758	165,096	5	68,790	825,480	13,758	165,096	13,758	165,096	3,205	3,205
HARPERS	12	10	14	302	3,624	3,197	38,364	3	9,591	115,092	3,197	38,364	3,197	38,364	745	745
HISTORIC PRESERVATION	6	10	14	293	1,758	1,704	10,224	3	5,112	30,672	1,704	10,224	1,704	10,224	198	198
JOURNAL FRANCAIS D'AMERIQUE	23	15	21	139	3,197	296	6,808	2	592	13,616	296	6,808	296	6,808	132	132
JOURNAL OF COUNSELING & DEV.	6	10	14	849	5,094	1,390	8,340	8	11,120	66,720	1,390	8,340	1,390	8,340	162	162
KIPLINGER'S PERSONAL FINANCE MAGAZIN	12	11	21	404	4,848	6,414	76,968	4	25,656	307,872	6,414	76,968	6,414	76,968	1,494	1,494
MAGAZINE OF THE MONTH	12	15	21	337	4,044	5,314	63,768	3	15,942	191,304	5,314	63,768	5,314	63,768	1,238	1,238
MONEY	15	10	14	522	7,830	5,618	84,270	5	28,090	421,350	5,618	84,270	5,618	84,270	1,636	1,636
MUSICAL MAINSTREAM	4	22	28	165	660	1,350	5,400	2	2,700	10,800	1,350	5,400	1,350	5,400	105	105
NATION	47	4	7	174	8,178	1,394	65,518	2	2,788	131,036	1,394	65,518	1,394	65,518	1,272	1,272
NATIONAL GEOGRAPHIC	12	10	14	213	2,556	14,648	175,776	2	29,296	351,552	14,648	175,776	14,648	175,776	3,413	3,413
NATIONAL GEOGRAPHIC WORLD	12	10	14	59	708	2,842	34,104	1	2,842	34,104	2,842	34,104	2,842	34,104	662	662
NATIONAL REVIEW	25	10	14	305	7,625	2,454	61,350	3	7,362	184,050	2,454	61,350	2,454	61,350	1,191	1,191
NATURAL HISTORY	12	10	14	215	2,580	3,469	41,628	3	10,407	124,884	3,469	41,628	3,469	41,628	808	808
NEW CHOICES	10	10	14	237	2,370	3,967	39,670	3	11,901	119,010	3,967	39,670	3,967	39,670	770	770
NEW YORK TIMES	52	4	7	112	5,824	4,515	234,780	1	4,515	234,780	4,515	234,780	4,515	234,780	4,558	4,558
OUTDOOR LIFE	12	10	14	370	4,440	3,407	40,884	4	13,628	163,536	3,407	40,884	3,407	40,884	794	794
PREVENTION	12	10	14	207	2,484	10,125	121,500	2	20,250	243,000	10,125	121,500	10,125	121,500	2,359	2,359
QST	12	20	28	693	8,316	1,697	20,364	6	10,182	122,184	1,697	20,364	1,697	20,364	395	395
QUARTERLY MUSIC MAGAZINE	4	22	28	418	1,672	2,542	10,168	4	10,168	40,672	2,542	10,168	2,542	10,168	197	197
SELECCIONES DEL READERS DIGEST	12	15	21	448	5,376	1,131	13,572	4	4,524	54,288	1,131	13,572	1,131	13,572	264	264
SOCIAL WORK	6	10	14	668	4,008	1,239	7,434	6	7,434	44,604	1,239	7,434	1,239	7,434	144	144
SPORTS ILLUSTRATED	53	4	7	179	9,487	5,832	309,096	2	11,664	618,192	5,832	309,096	5,832	309,096	6,001	6,001
STEREO REVIEW	12	10	14	391	4,692	1,972	23,664	4	7,888	94,656	1,972	23,664	1,972	23,664	459	459
TRAVEL/HOLIDAY	10	10	14	249	2,490	3,223	32,230	3	9,669	96,690	3,223	32,230	3,223	32,230	626	626
TRUE WEST	12	10	14	171	2,052	5,157	61,884	2	10,314	123,768	5,157	61,884	5,157	61,884	1,201	1,201
US NEWS AND WORLD REPORT	50	5	7	240	12,000	12,500	625,000	2	25,000	1,250,000	12,500	625,000	12,500	625,000	12,134	12,134
WRITER	12	10	14	241	2,892	1,954	23,448	3	5,862	70,344	1,954	23,448	1,954	23,448	455	455
TOTAL MAGAZINES	681				186,493	171,712	3,009,662		547,374	8,196,385	171,712	3,009,662	171,712	3,009,662	58,433	58,433
WEIGHTED AVERAGE PER ISSUE				274		4,419		2.7								
TALKING BOOK TOPICS-FD-IND, DISC	6	35	42	240	1,440	46,000	276,000	2	92,000	552,000						
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6	35	42			46,000	276,000	1								
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	35	42			46,000	276,000	1								
TALKING BOOK TOPICS-FD-IND	6	35	42			46,000	276,000				46,000	276,000	46,000	276,000	5,359	5,359
TALKING BOOK TOPICS-FD-BULK	6	35	42	240	1,440	10,000	60,000	2	20,000	120,000	0	0	0	0	0	0
TALKING BOOK TOPICS-FD	6	35	42	240	1,440	56,000	336,000		112,000	672,000	46,000	276,000	46,000	276,000	5,359	5,359
TALKING BOOK TOPICS-CASSETTE, CASS.	6	35	42	240	1,440	100,000	600,000	1	100,000	600,000						
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6	35	42			100,000	600,000	1								
TALKING BOOK TOPICS-CASSETTE	6	35	42	240	1,440	100,000	600,000				100,000	600,000	100,000	600,000	11,649	11,649
TALKING BOOK TOPICS-TOTAL	6	35	42	240	1,440	156,000	936,000				146,000	876,000	146,000	876,000	17,008	17,008
GRAND TOTAL	687				187,933	327,712	3,945,662				317,712	3,885,662	317,712	3,885,662	75,440	75,440
WEIGHTED AVERAGE PER ISSUE				274		5,743										

Appendix 2-2

ANNUAL MAGAZINE PUBLICATION REQUIREMENTS BY FREQUENCY OF ISSUE

1	2	3	4	5	6	7	8	9	10
MAGAZINE TITLE	Issues per Year	Required Response Time Working Days	Required Response Time Calendar Days	Average Minutes Per Issue	Average Minutes Per Year	Average Copies Per Issue	Average Copies Per Year	Percent of Copies Per Year	Cummulative Percent of Copies Per Year
SPORTS ILLUSTRATED	53	4	7	179	9,487	5,832	309,096	10.3%	10.3%
BOOK WORLD	52	4	7	149	7,748	1,674	87,048	2.9%	13.2%
NEW YORK TIMES	52	4	7	112	5,824	4,515	234,780	7.8%	21.0%
US NEWS AND WORLD REPORT	50	5	7	240	12,000	12,500	625,000	20.8%	41.7%
NATION	47	4	7	174	8,178	1,394	65,518	2.2%	43.9%
NATIONAL REVIEW	25	10	14	305	7,625	2,454	61,350	2.0%	45.9%
JOURNAL FRANCAIS D'AMERIQUE	23	15	21	139	3,197	296	6,808	0.2%	46.2%
MONEY	15	10	14	522	7,830	5,618	84,270	2.8%	49.0%
ANALOG	13	10	14	568	7,384	3,074	39,962	1.3%	50.3%
ELLERY QUEENS MYSTERY MAGAZINE	13	11	21	392	5,096	9,401	122,213	4.1%	54.4%
FARM JOURNAL	13	10	14	253	3,289	1,929	25,077	0.8%	55.2%
QST	12	20	28	693	8,316	1,697	20,364	0.7%	55.9%
GOOD HOUSEKEEPING	12	11	21	554	6,648	13,758	165,096	5.5%	61.4%
ENCORE	12	10	14	523	6,276	1,828	21,936	0.7%	62.1%
CONSUMER REPORTS	12	10	14	488	5,856	8,224	98,688	3.3%	65.4%
SELECCIONES DEL READERS DIGEST	12	15	21	448	5,376	1,131	13,572	0.5%	65.8%
KIPLINGER'S PERSONAL FINANCE MAGAZIN	12	11	21	404	4,848	6,414	76,968	2.6%	68.4%
STEREO REVIEW	12	10	14	391	4,692	1,972	23,664	0.8%	69.2%
OUTDOOR LIFE	12	10	14	370	4,440	3,407	40,884	1.4%	70.5%
ATLANTIC MONTHLY	12	10	14	358	4,296	3,664	43,968	1.5%	72.0%
MAGAZINE OF THE MONTH	12	15	21	337	4,044	5,314	63,768	2.1%	74.1%
BESTE AUS READERS DIGEST	12	10	14	307	3,684	298	3,576	0.1%	74.2%
HARPERS	12	10	14	302	3,624	3,197	38,364	1.3%	75.5%
BUENHOGAR	12	15	21	274	3,288	737	8,844	0.3%	75.8%
WRITER	12	10	14	241	2,892	1,954	23,448	0.8%	76.6%
NATURAL HISTORY	12	10	14	215	2,580	3,469	41,628	1.4%	77.9%
NATIONAL GEOGRAPHIC	12	10	14	213	2,556	14,648	175,776	5.8%	83.8%
EBONY	12	10	14	208	2,496	3,092	37,104	1.2%	85.0%
PREVENTION	12	10	14	207	2,484	10,125	121,500	4.0%	89.1%
TRUE WEST	12	10	14	171	2,052	5,157	61,884	2.1%	91.1%
CHILDRENS MAGAZINE PROGRAM	12	10	14	72	864	3,153	37,836	1.3%	92.4%
NATIONAL GEOGRAPHIC WORLD	12	10	14	59	708	2,842	34,104	1.1%	93.5%
TRAVEL/HOLIDAY	10	10	14	249	2,490	3,223	32,230	1.1%	94.6%
NEW CHOICES	10	10	14	237	2,370	3,967	39,670	1.3%	95.9%
AMERICAN HERITAGE	8	10	14	312	2,496	5,261	42,088	1.4%	97.3%
FOREIGN AFFAIRS	7	15	21	447	3,129	2,406	16,842	0.6%	97.8%
JOURNAL OF COUNSELING & DEV.	6	10	14	849	5,094	1,390	8,340	0.3%	98.1%
SOCIAL WORK	6	10	14	668	4,008	1,239	7,434	0.2%	98.4%
CIVILIZATION	6	10	14	346	2,076	2,000	12,000	0.4%	98.8%
HISTORIC PRESERVATION	6	10	14	293	1,758	1,704	10,224	0.3%	99.1%
CONTEMPORARY SOUNDTRACK	6	22	28	177	1,062	1,862	11,172	0.4%	99.5%
QUARTERLY MUSIC MAGAZINE	4	22	28	418	1,672	2,542	10,168	0.3%	99.8%
MUSICAL MAINSTREAM	4	22	28	165	660	1,350	5,400	0.2%	100.0%
TOTAL MAGAZINES	681				186,493	171,712	3,009,662	100.0%	100.0%
WEIGHTED AVERAGE PER ISSUE				274		4,419			
TALKING BOOK TOPICS-FD-IND, DISC	6	35	42	240	1,440	46,000	276,000	7.0%	
TALKING BOOK TOPICS-FD-IND, STIFR /ENV.	6	35	42			46,000	276,000		
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	35	42			46,000	276,000		
TALKING BOOK TOPICS-FD-IND	6	35	42			46,000	276,000		
TALKING BOOK TOPICS-FD-BULK	6	35	42	240	1,440	10,000	60,000	1.5%	
TALKING BOOK TOPICS-FD	6	35	42	240	1,440	56,000	336,000	8.5%	
TALKING BOOK TOPICS-CASSETTE, CASS.	6	35	42	240	1,440	100,000	600,000	15.2%	
TALKING BOOK TOPICS-CASSETTE, PK /FM.	6	35	42			100,000	600,000		
TALKING BOOK TOPICS-CASSETTE	6	35	42	240	1,440	100,000	600,000		
TALKING BOOK TOPICS-TOTAL	6	35	42	240	1,440	156,000	936,000	23.7%	
GRAND TOTAL	687				187,933	327,712	3,945,662		

Appendix 3-1

SUMMARY OF PRESENT ANNUAL NARRATION COSTS BY TITLE

1	2	3	4	5	6	7	8	9	10
MAGAZINE TITLE	Issues per Year	Average Minutes Per Issue	Average Minutes Per Year	Average Copies Per Issue	Average Copies Per Year	Narration Unit Cost Per Minute	Narration Cost Per Copy	Narration Cost Per Issue	Narration Cost Per Year
JOURNAL FRANCAIS D'AMERIQUE	23	139	3,197	296	6,808	$4.09	$1.921	$569	$13,076
MUSICAL MAINSTREAM	4	165	660	1,350	5,400	$4.09	$0.500	$675	$2,699
CONTEMPORARY SOUNDTRACK	6	177	1,062	1,862	11,172	$4.09	$0.389	$724	$4,344
BUENHOGAR	12	274	3,288	737	8,844	$4.09	$1.521	$1,121	$13,448
STEREO REVIEW	12	391	4,692	1,972	23,664	$4.09	$0.811	$1,599	$19,190
QUARTERLY MUSIC MAGAZINE	4	418	1,672	2,542	10,168	$4.09	$0.673	$1,710	$6,838
SELECCIONES DEL READERS DIGEST	12	448	5,376	1,131	13,572	$4.09	$1.620	$1,832	$21,988
NATIONAL GEOGRAPHIC WORLD	12	59	708	2,842	34,104	$4.37	$0.091	$258	$3,094
CHILDRENS MAGAZINE PROGRAM	12	72	864	3,153	37,836	$4.37	$0.100	$315	$3,776
NEW YORK TIMES	52	112	5,824	4,515	234,780	$4.37	$0.108	$489	$25,451
BOOK WORLD	52	149	7,748	1,674	87,048	$4.37	$0.389	$651	$33,859
TRUE WEST	12	171	2,052	5,157	61,884	$4.37	$0.145	$747	$8,967
NATION	47	174	8,178	1,394	65,518	$4.37	$0.545	$760	$35,738
SPORTS ILLUSTRATED	53	179	9,487	5,832	309,096	$4.37	$0.134	$782	$41,458
PREVENTION	12	207	2,484	10,125	121,500	$4.37	$0.069	$905	$10,855
EBONY	12	208	2,496	3,092	37,104	$4.37	$0.294	$909	$10,908
NATIONAL GEOGRAPHIC	12	213	2,556	14,648	175,776	$4.37	$0.064	$931	$11,170
NATURAL HISTORY	12	215	2,580	3,469	41,628	$4.37	$0.271	$940	$11,275
NEW CHOICES	10	237	2,370	3,967	39,670	$4.37	$0.261	$1,036	$10,357
US NEWS AND WORLD REPORT	50	240	12,000	12,500	625,000	$4.37	$0.084	$1,049	$52,440
WRITER	12	241	2,892	1,954	23,448	$4.37	$0.539	$1,053	$12,638
TRAVEL/HOLIDAY	10	249	2,490	3,223	32,230	$4.37	$0.338	$1,088	$10,881
FARM JOURNAL	13	253	3,289	1,929	25,077	$4.37	$0.573	$1,106	$14,373
HISTORIC PRESERVATION	6	293	1,758	1,704	10,224	$4.37	$0.751	$1,280	$7,682
HARPERS	12	302	3,624	3,197	38,364	$4.37	$0.413	$1,320	$15,837
NATIONAL REVIEW	25	305	7,625	2,454	61,350	$4.37	$0.543	$1,333	$33,321
BESTE AUS READERS DIGEST	12	307	3,684	298	3,576	$4.37	$4.502	$1,342	$16,099
AMERICAN HERITAGE	8	312	2,496	5,261	42,088	$4.37	$0.259	$1,363	$10,908
MAGAZINE OF THE MONTH	12	337	4,044	5,314	63,768	$4.37	$0.277	$1,473	$17,672
CIVILIZATION	6	346	2,076	2,000	12,000	$4.37	$0.756	$1,512	$9,072
ATLANTIC MONTHLY	12	358	4,296	3,664	43,968	$4.37	$0.427	$1,564	$18,774
OUTDOOR LIFE	12	370	4,440	3,407	40,884	$4.37	$0.475	$1,617	$19,403
ELLERY QUEENS MYSTERY MAGAZINE	13	392	5,096	9,401	122,213	$4.37	$0.182	$1,713	$22,270
KIPLINGER'S PERSONAL FINANCE MAGAZINE	12	404	4,848	6,414	76,968	$4.37	$0.275	$1,765	$21,186
FOREIGN AFFAIRS	7	447	3,129	2,406	16,842	$4.37	$0.812	$1,953	$13,674
CONSUMER REPORTS	12	488	5,856	8,224	98,688	$4.37	$0.259	$2,133	$25,591
MONEY	15	522	7,830	5,618	84,270	$4.37	$0.406	$2,281	$34,217
ENCORE	12	523	6,276	1,828	21,936	$4.37	$1.250	$2,286	$27,426
GOOD HOUSEKEEPING	12	554	6,648	13,758	165,096	$4.37	$0.176	$2,421	$29,052
ANALOG	13	568	7,384	3,074	39,962	$4.37	$0.807	$2,482	$32,268
SOCIAL WORK	6	668	4,008	1,239	7,434	$4.37	$2.356	$2,919	$17,515
QST	12	693	8,316	1,697	20,364	$4.37	$1.785	$3,028	$36,341
JOURNAL OF COUNSELING & DEV.	6	849	5,094	1,390	8,340	$4.37	$2.669	$3,710	$22,261
TOTAL MAGAZINES	681		186,493	171,712	3,009,662				$809,369
WEIGHTED AVERAGE PER ISSUE		274		4,419					
TALKING BOOK TOPICS-FD-IND, DISC	6	240	1,440	46,000	276,000				
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6			46,000	276,000				
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6			46,000	276,000				
TALKING BOOK TOPICS-FD-IND	6			46,000	276,000				
TALKING BOOK TOPICS-FD-BULK	6	240	1,440	10,000	60,000				
TALKING BOOK TOPICS-FD	6	240	1,440	56,000	336,000				
TALKING BOOK TOPICS-CASSETTE, CASS.	6	240	1,440	100,000	600,000				
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6			100,000	600,000				
TALKING BOOK TOPICS-CASSETTE	6	240	1,440	100,000	600,000				
TALKING BOOK TOPICS-TOTAL	6	240	1,440	156,000	936,000	$4.37	$0.007	$1,049	$6,293
GRAND TOTAL	687		187,933	327,712	3,945,662				$815,682
WEIGHTED AVERAGE PER ISSUE		274		5,743					
NARRATOR 1	73	2,012	19,947	9,890	79,628			$8,229	$81,583
NARRATOR 2	614	12,257	167,986	317,822	3,866,034			$53,563	$734,099
TOTAL	687	14,269	187,933	327,712	3,945,662			$61,792	$815,682

Costs based upon FY96 contract rates & workload statistics for 12-mon. end 8/95

Appendix 3-2

ANNUAL NARRATION COSTS BY TITLE: CURRENT AND WITH IMPUTED FIXED COST

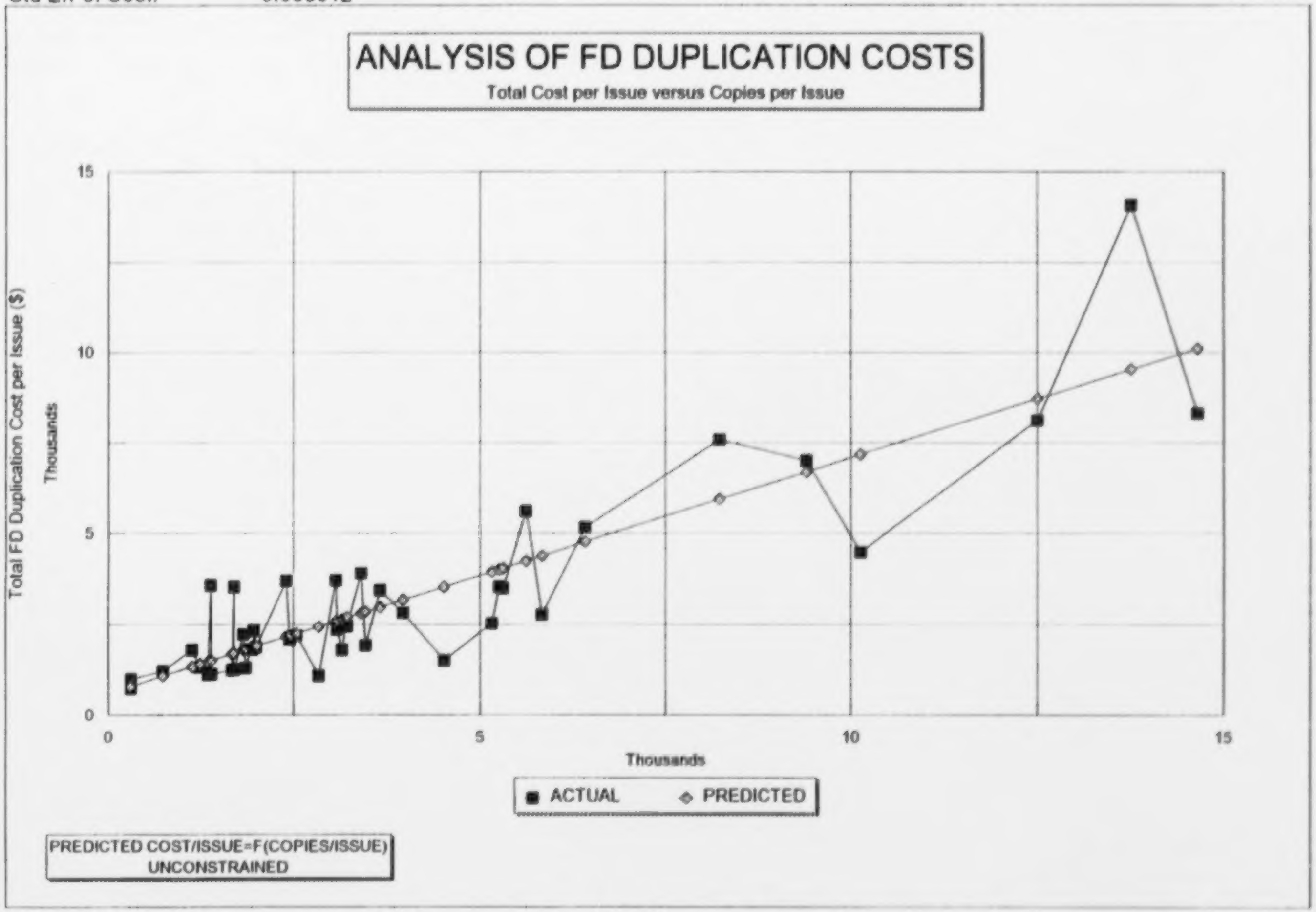
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MAGAZINE TITLE	Issues per Year	Average Minutes Per Issue	Average Minutes Per Year	Average Copies Per Issue	Average Copies Per Year	Narration Unit Cost Per Minute	Narration Cost Per Copy	Narration Cost Per Issue	Narration Cost Per Year	$100 Imputed Narration Fixed Cost Per Issue	Derived Narration Fixed Cost Per Year	Derived Narration Var. Cost Per Issue	Derived Narration Var. Cost Per Minute	Derived Narration Var. Cost Per Year	Derived Narration Total Cost Per Issue	Derived Narration Total Cost Per Year	Derived Narration Total Cost Per Copy
JOURNAL FRANCAIS D'AMERIQUE	23	139	3,197	296	6,808	$4.09	$1.921	$569	$13,076	$100	$2,300	$518	$3.72	$11,906	$618	$14,206	$2.087
MUSICAL MAINSTREAM	4	165	660	1,350	5,400	$4.09	$0.500	$675	$2,699	$100	$400	$614	$3.72	$2,458	$714	$2,858	$0.529
CONTEMPORARY SOUNDTRACK	6	177	1,062	1,862	11,172	$4.09	$0.389	$724	$4,344	$100	$600	$659	$3.72	$3,955	$759	$4,555	$0.408
BUENHOGAR	12	274	3,288	737	8,844	$4.09	$1.521	$1,121	$13,448	$100	$1,200	$1,020	$3.72	$12,245	$1,120	$13,445	$1.520
STEREO REVIEW	12	391	4,692	1,972	23,664	$4.09	$0.811	$1,599	$19,190	$100	$1,200	$1,456	$3.72	$17,473	$1,556	$18,673	$0.789
QUARTERLY MUSIC MAGAZINE	4	418	1,672	2,542	10,168	$4.09	$0.673	$1,710	$6,838	$100	$400	$1,557	$3.72	$6,227	$1,657	$6,627	$0.652
SELECCIONES DEL READERS DIGEST	12	448	5,376	1,131	13,572	$4.09	$1.620	$1,832	$21,988	$100	$1,200	$1,668	$3.72	$20,020	$1,768	$21,220	$1.564
NATIONAL GEOGRAPHIC WORLD	12	59	708	2,842	34,104	$4.37	$0.091	$258	$3,094	$100	$1,200	$236	$4.00	$2,835	$336	$4,035	$0.118
CHILDRENS MAGAZINE PROGRAM	12	72	864	3,153	37,836	$4.37	$0.100	$315	$3,776	$100	$1,200	$288	$4.00	$3,460	$388	$4,660	$0.123
NEW YORK TIMES	52	112	5,824	4,515	234,780	$4.37	$0.108	$489	$25,451	$100	$5,200	$449	$4.00	$23,322	$549	$28,522	$0.121
BOOK WORLD	52	149	7,748	1,674	87,048	$4.37	$0.389	$651	$33,859	$100	$5,200	$597	$4.00	$31,027	$697	$36,227	$0.416
TRUE WEST	12	171	2,052	5,157	61,884	$4.37	$0.145	$747	$8,967	$100	$1,200	$685	$4.00	$8,217	$785	$9,417	$0.152
NATION	47	174	8,178	1,394	65,518	$4.37	$0.545	$760	$35,738	$100	$4,700	$697	$4.00	$32,749	$797	$37,449	$0.572
SPORTS ILLUSTRATED	53	179	9,487	5,832	309,096	$4.37	$0.134	$782	$41,458	$100	$5,300	$717	$4.00	$37,991	$817	$43,291	$0.140
PREVENTION	12	207	2,484	10,125	121,500	$4.37	$0.089	$905	$10,855	$100	$1,200	$829	$4.00	$9,947	$929	$11,147	$0.092
EBONY	12	208	2,496	3,092	37,104	$4.37	$0.294	$909	$10,908	$100	$1,200	$833	$4.00	$9,995	$933	$11,195	$0.302
NATIONAL GEOGRAPHIC	12	213	2,556	14,648	175,776	$4.37	$0.064	$931	$11,170	$100	$1,200	$853	$4.00	$10,235	$953	$11,435	$0.065
NATURAL HISTORY	12	'215	2,580	3,469	41,628	$4.37	$0.271	$940	$11,275	$100	$1,200	$861	$4.00	$10,332	$961	$11,532	$0.277
NEW CHOICES	10	237	2,370	3,967	39,670	$4.37	$0.261	$1,036	$10,357	$100	$1,000	$949	$4.00	$9,491	$1,049	$10,491	$0.264
US NEWS AND WORLD REPORT	50	240	12,000	12,500	625,000	$4.37	$0.084	$1,049	$52,440	$100	$5,000	$961	$4.00	$48,054	$1,061	$53,054	$0.085
WRITER	12	241	2,892	1,954	23,448	$4.37	$0.539	$1,053	$12,638	$100	$1,200	$965	$4.00	$11,581	$1,065	$12,781	$0.545
TRAVEL/HOLIDAY	10	249	2,490	3,223	32,230	$4.37	$0.338	$1,088	$10,881	$100	$1,000	$997	$4.00	$9,971	$1,097	$10,971	$0.340
FARM JOURNAL	13	253	3,289	1,929	25,077	$4.37	$0.573	$1,106	$14,373	$100	$1,300	$1,013	$4.00	$13,171	$1,113	$14,471	$0.577
HISTORIC PRESERVATION	6	293	1,758	1,704	10,224	$4.37	$0.751	$1,280	$7,682	$100	$600	$1,173	$4.00	$7,040	$1,273	$7,640	$0.747
HARPERS	12	302	3,624	3,197	38,364	$4.37	$0.413	$1,320	$15,837	$100	$1,200	$1,209	$4.00	$14,512	$1,309	$15,712	$0.410
NATIONAL REVIEW	25	305	7,625	2,454	61,350	$4.37	$0.543	$1,333	$33,321	$100	$2,500	$1,221	$4.00	$30,534	$1,321	$33,034	$0.538
BESTE AUS READERS DIGEST	12	307	3,684	298	3,576	$4.37	$4.502	$1,342	$16,099	$100	$1,200	$1,229	$4.00	$14,753	$1,329	$15,953	$4.461
AMERICAN HERITAGE	8	312	2,496	5,261	42,088	$4.37	$0.259	$1,363	$10,908	$100	$800	$1,249	$4.00	$9,995	$1,349	$10,795	$0.256
MAGAZINE OF THE MONTH	12	337	4,044	5,314	63,768	$4.37	$0.277	$1,473	$17,672	$100	$1,200	$1,350	$4.00	$16,194	$1,450	$17,394	$0.273
CIVILIZATION	6	346	2,076	2,000	12,000	$4.37	$0.756	$1,512	$9,072	$100	$600	$1,386	$4.00	$8,313	$1,486	$8,913	$0.743
ATLANTIC MONTHLY	12	358	4,296	3,664	43,968	$4.37	$0.427	$1,564	$18,774	$100	$1,200	$1,434	$4.00	$17,203	$1,534	$18,403	$0.419
OUTDOOR LIFE	12	370	4,440	3,407	40,884	$4.37	$0.475	$1,617	$19,403	$100	$1,200	$1,482	$4.00	$17,780	$1,582	$18,980	$0.464
ELLERY QUEENS MYSTERY MAGAZINE	13	392	5,096	9,401	122,213	$4.37	$0.182	$1,713	$22,270	$100	$1,300	$1,570	$4.00	$20,407	$1,670	$21,707	$0.178
KIPLINGER'S PERSONAL FINANCE MAGAZINE	12	404	4,848	6,414	76,968	$4.37	$0.275	$1,765	$21,186	$100	$1,200	$1,618	$4.00	$19,414	$1,718	$20,614	$0.268
FOREIGN AFFAIRS	7	447	3,129	2,406	16,842	$4.37	$0.812	$1,953	$13,674	$100	$700	$1,790	$4.00	$12,530	$1,890	$13,230	$0.786
CONSUMER REPORTS	12	488	5,856	8,224	98,688	$4.37	$0.259	$2,133	$25,591	$100	$1,200	$1,954	$4.00	$23,450	$2,054	$24,650	$0.250
MONEY	15	522	7,830	5,618	84,270	$4.37	$0.406	$2,281	$34,217	$100	$1,500	$2,090	$4.00	$31,355	$2,190	$32,855	$0.390
ENCORE	12	523	6,276	1,828	21,936	$4.37	$1.250	$2,286	$27,426	$100	$1,200	$2,094	$4.00	$25,132	$2,194	$26,332	$1.200
GOOD HOUSEKEEPING	12	554	6,648	13,758	165,096	$4.37	$0.176	$2,421	$29,052	$100	$1,200	$2,218	$4.00	$26,622	$2,318	$27,822	$0.169
ANALOG	13	568	7,384	3,074	39,962	$4.37	$0.807	$2,482	$32,268	$100	$1,300	$2,275	$4.00	$29,569	$2,375	$30,869	$0.772
SOCIAL WORK	6	668	4,008	1,239	7,434	$4.37	$2.356	$2,919	$17,515	$100	$600	$2,675	$4.00	$16,050	$2,775	$16,650	$2.240
QST	12	693	8,316	1,697	20,364	$4.37	$1.785	$3,028	$36,341	$100	$1,200	$2,775	$4.00	$33,301	$2,875	$34,501	$1.694
JOURNAL OF COUNSELING & DEV.	6	849	5,094	1,390	8,340	$4.37	$2.669	$3,710	$22,261	$100	$600	$3,400	$4.00	$20,399	$3,500	$20,999	$2.518
TOTAL MAGAZINES	681		186,493	171,712	3,009,662				$809,389								
WEIGHTED AVERAGE PER ISSUE		274		4,419													
TALKING BOOK TOPICS-FD-IND, DISC	6	240	1,440	46,000	276,000												
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6			46,000	276,000												
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6			46,000	276,000												
TALKING BOOK TOPICS-FD-IND	6			46,000	276,000												
TALKING BOOK TOPICS-FD-BULK	6	240	1,440	10,000	60,000												
TALKING BOOK TOPICS-FD	6	240	1,440	56,000	336,000												
TALKING BOOK TOPICS-CASSETTE, CASS.	6	240	1,440	100,000	600,000												
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6			100,000	600,000												
TALKING BOOK TOPICS-CASSETTE	6	240	1,440	100,000	600,000												
TALKING BOOK TOPICS-TOTAL	6	240	1,440	156,000	936,000	$4.37	$0.007	$1,049	$6,293	$100	$600	$961	$4.00	$5,766	$1,061	$6,366	$0.007
GRAND TOTAL	687		187,933	327,712	3,945,662				$815,682								
WEIGHTED AVERAGE PER ISSUE		274		5,743													
NARRATOR 1	73	2,012	19,947	9,890	79,628			$8,229	$81,583	$700	$7,300	$7,493	$3.72	$74,283	$8,193	$81,583	
NARRATOR 2	614	12,257	167,986	317,822	3,866,034			$53,563	$734,099	$3,700	$61,400	$49,083	$4.00	$672,699	$52,783	$734,099	
TOTAL	687	14,269	187,933	327,712	3,945,662			$61,792	$815,682	$4,400	$68,700	$56,576	$3.97	$746,982	$60,976	$815,682	

Costs based upon FY96 contract rates & workload statistics for 12-mon. end 8/95

Appendix 3-3

FD DUPLICATION COST ANALYSES

Regression Output:		
Constant		599.6608
Std Err of Y Est		1243.928
R Squared		0.772338
No. of Observations		43
Degrees of Freedom		41
X Coefficient(s)	0.648792	
Std Err of Coef.	0.055012	



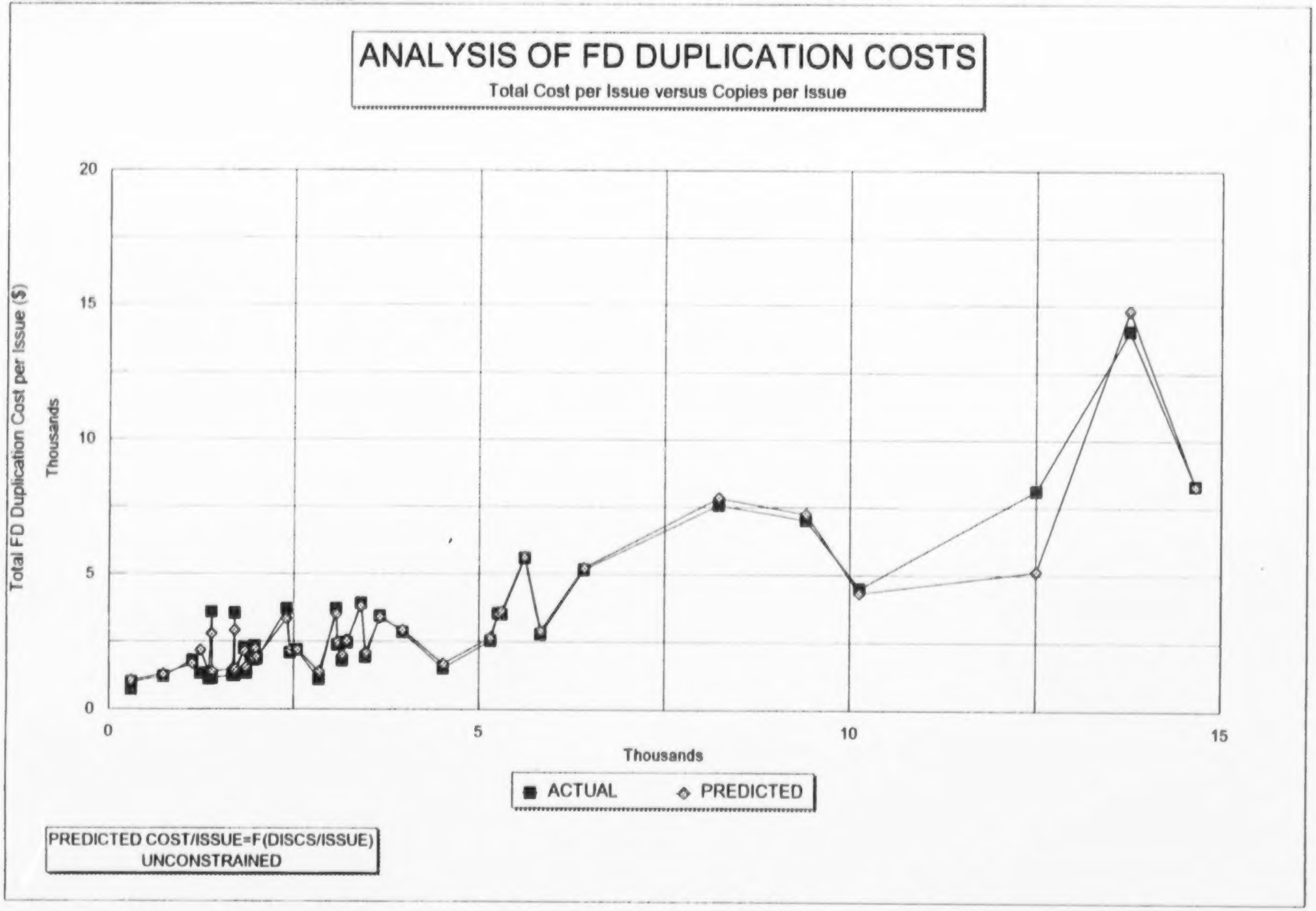
Costs based upon FY96 contract rates and contract specified workload.

Appendix 3-4

FD DUPLICATION COST ANALYSES

Regression Output:

Constant		906.848
Std Err of Y Est		548.1053
R Squared		0.955799
No. of Observations		43
Degrees of Freedom		41
X Coefficient(s)	0.168459	
Std Err of Coef.	0.005658	

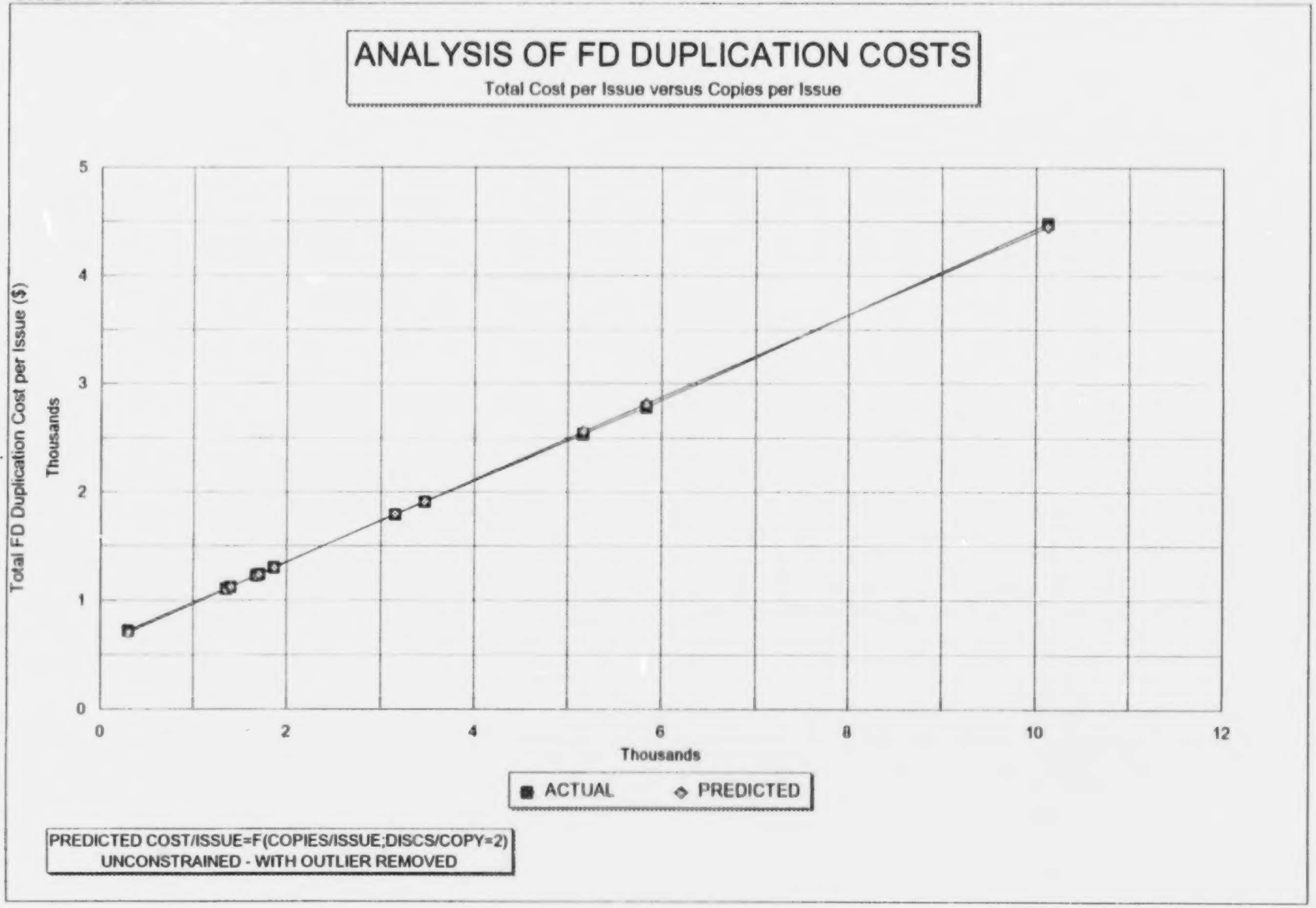


Costs based upon FY96 contract rates and contract specified workload.

Appendix 3-5

FD DUPLICATION COST ANALYSES

Regression Output:		
Constant		592.8148
Std Err of Y Est		17.21345
R Squared		0.999771
No. of Observations		11
Degrees of Freedom		9
X Coefficient(s)	0.380761	
Std Err of Coef.	0.001922	



ANALYSIS OF FD DUPLICATION COSTS

Total Cost per Issue versus Copies per Issue

PREDICTED COST/ISSUE=F(COPIES/ISSUE;DISCS/COPY=2)
UNCONSTRAINED - WITH OUTLIER REMOVED

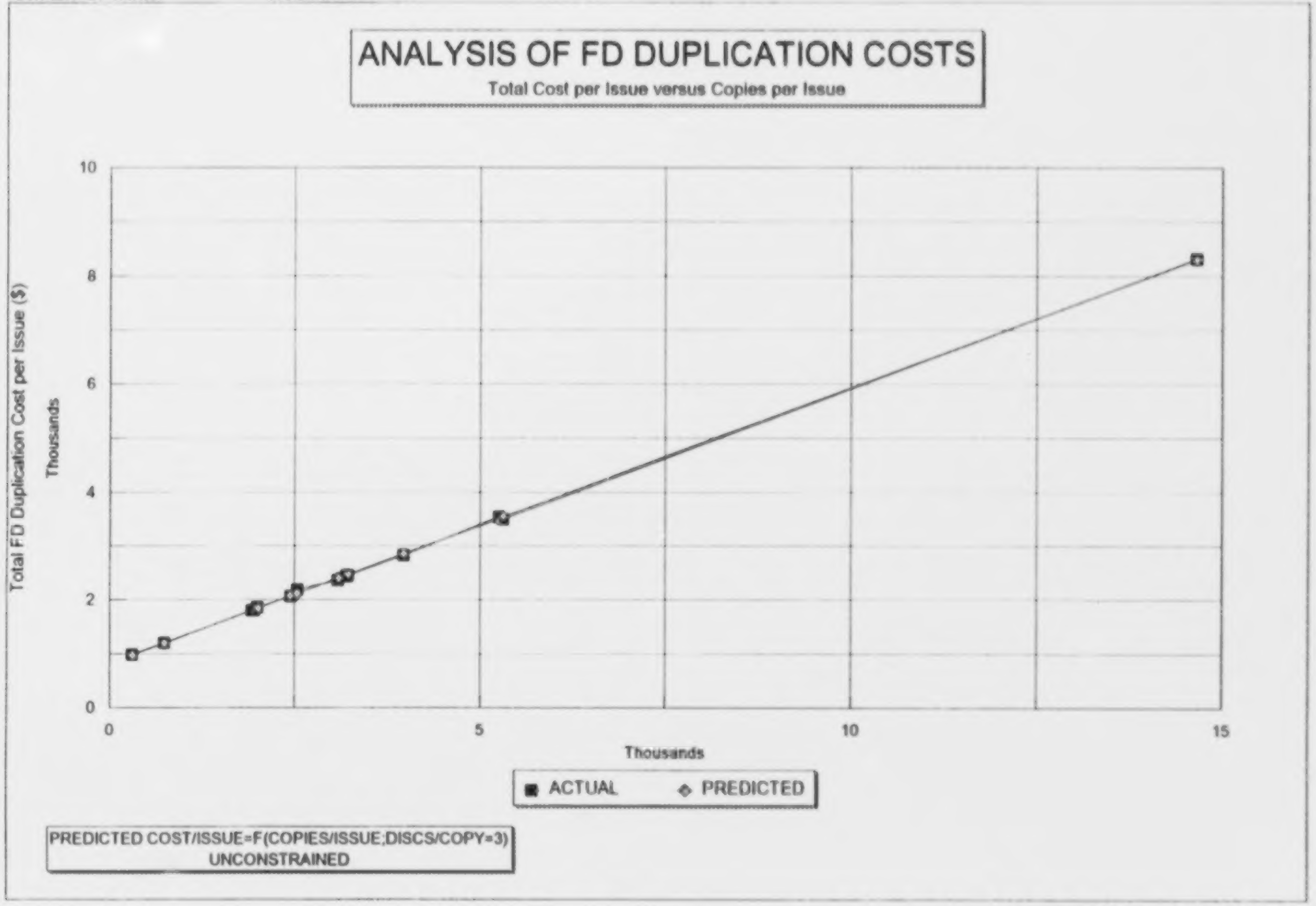
Costs based upon FY96 contract rates and contract specified workload.

Appendix 3-6

FD DUPLICATION COST ANALYSES

Regression Output:

Constant		819.4622
Std Err of Y Est		28.86416
R Squared		0.999758
No. of Observations		14
Degrees of Freedom		12
X Coefficient(s)	0.511464	
Std Err of Coef.	0.002296	


ANALYSIS OF FD DUPLICATION COSTS

Total Cost per Issue versus Copies per Issue

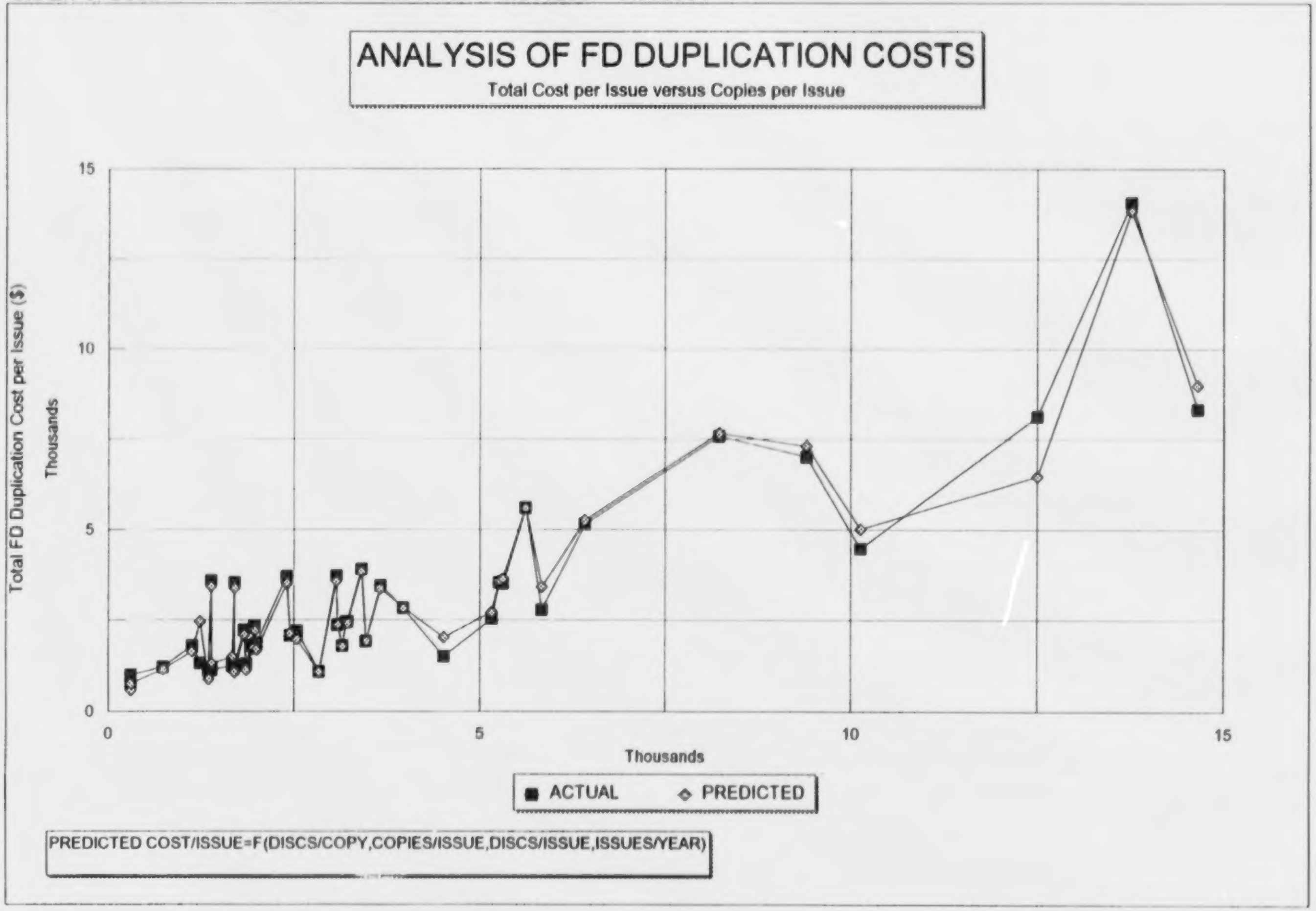
PREDICTED COST/ISSUE=F(COPIES/ISSUE;DISCS/COPY=3)
UNCONSTRAINED

Costs based upon FY96 contract rates and contract specified workload.

Appendix 3-7

FD DUPLICATION COST ANALYSES

Regression Output:				
Constant		-314.365		
Std Err of Y Est		403.2943		
R Squared		0.977821		
No. of Observations		43		
Degrees of Freedom		38		
X Coefficient(s)	264.3414	0.240436	0.110759	9.41001
Std Err of Coef.	57.54114	0.044683	0.011258	5.095994



Costs based upon FY96 contract rates and contract specified workload.

Appendix 3-8

CURRENT PLAYBACK MACHINE COSTS FOR MAGAZINE PROGRAM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAGAZINE TITLE	Current TBM-Hours Per Year	Current CBM-Hours Per Year	MTBF(HR)= 1,660 Current TBM Repairs* Per Year	MTBF(HR)= 1,460 Current CBM Repairs Per Year	MTTR(HR)= 1.0 Current TBM Labor Hours/Year	MTTR(HR)= 1.5 Current CBM Labor Hours/Year	Paid Stf.= 10% Rate($/HR)= $25 Current TBM Labor Cost/Year	Paid Stf.= 10% ate($/HR) $25 Current CBM Labor Cost/Year	Avg Cost= $16 Current TBM Parts Cost/Year	Avg Cost= $16 Current CBM Parts Cost/Year	Current Machine Repair Cost/Year	New Cost= $228 Life(HRS)= 4,380 Current TBM Depletion Per Year	New Cost= $236 Life(HRS)= 4,380 Current CBM Depletion Per Year	Current Machine Depletion Cost/Year	Current Machine Cost/Year
US NEWS AND WORLD REPORT	2,500,000	0	1,506	0	1,506	0	$3,765	0	$24,096	$0	$27,861	$130,184	$0	$130,184	$158,045
GOOD HOUSEKEEPING	1,524,386	0	918	0	918	0	$2,296	0	$14,693	$0	$16,989	$79,380	$0	$79,380	$96,369
SPORTS ILLUSTRATED	922,136	0	556	0	556	0	$1,389	0	$8,888	$0	$10,277	$48,019	$0	$48,019	$58,296
CONSUMER REPORTS	802,662	0	484	0	484	0	$1,209	0	$7,737	$0	$8,945	$41,797	$0	$41,797	$50,743
ELLERY QUEENS MYSTERY MAGAZINE	798,458	0	481	0	481	0	$1,202	0	$7,696	$0	$8,898	$41,578	$0	$41,578	$50,477
MONEY	733,149	0	442	0	442	0	$1,104	0	$7,066	$0	$8,171	$38,178	$0	$38,178	$46,348
NATIONAL GEOGRAPHIC	624,005	0	376	0	376	0	$940	0	$6,015	$0	$6,954	$32,494	$0	$32,494	$39,448
KIPLINGER'S PERSONAL FINANCE MAGAZINE	518,251	0	312	0	312	0	$780	0	$4,995	$0	$5,776	$26,987	$0	$26,987	$32,763
NEW YORK TIMES	438,256	0	264	0	264	0	$660	0	$4,224	$0	$4,884	$22,821	$0	$22,821	$27,706
PREVENTION	419,175	0	253	0	253	0	$631	0	$4,040	$0	$4,672	$21,828	$0	$21,828	$26,499
ANALOG	378,307	0	228	0	228	0	$570	0	$3,646	$0	$4,216	$19,700	$0	$19,700	$23,916
MAGAZINE OF THE MONTH	358,164	0	216	0	216	0	$539	0	$3,452	$0	$3,992	$18,651	$0	$18,651	$22,642
NATIONAL REVIEW	311,863	0	188	0	188	0	$470	0	$3,006	$0	$3,476	$16,240	$0	$16,240	$19,715
ATLANTIC MONTHLY	262,342	0	158	0	158	0	$395	0	$2,529	$0	$2,924	$13,661	$0	$13,661	$16,585
OUTDOOR LIFE	252,118	0	152	0	152	0	$380	0	$2,430	$0	$2,810	$13,129	$0	$13,129	$15,938
QST	235,204	0	142	0	142	0	$354	0	$2,267	$0	$2,621	$12,248	$0	$12,248	$14,869
AMERICAN HERITAGE	218,858	0	132	0	132	0	$330	0	$2,109	$0	$2,439	$11,397	$0	$11,397	$13,836
BOOK WORLD	216,169	0	130	0	130	0	$326	0	$2,084	$0	$2,409	$11,257	$0	$11,257	$13,666
HARPERS	193,099	0	116	0	116	0	$291	0	$1,861	$0	$2,152	$10,055	$0	$10,055	$12,207
ENCORE	191,209	0	115	0	115	0	$288	0	$1,843	$0	$2,131	$9,957	$0	$9,957	$12,088
NATION	190,002	0	114	0	114	0	$286	0	$1,831	$0	$2,117	$9,894	$0	$9,894	$12,012
TRUE WEST	176,369	0	106	0	106	0	$266	0	$1,700	$0	$1,966	$9,184	$0	$9,184	$11,150
NEW CHOICES	156,697	0	94	0	94	0	$236	0	$1,510	$0	$1,746	$8,160	$0	$8,160	$9,906
STEREO REVIEW	154,210	0	93	0	93	0	$232	0	$1,486	$0	$1,719	$8,030	$0	$8,030	$9,749
NATURAL HISTORY	149,167	0	90	0	90	0	$225	0	$1,438	$0	$1,662	$7,768	$0	$7,768	$9,430
TRAVEL/HOLIDAY	133,755	0	81	0	81	0	$201	0	$1,289	$0	$1,491	$6,965	$0	$6,965	$8,456
EBONY	128,627	0	77	0	77	0	$194	0	$1,240	$0	$1,433	$6,698	$0	$6,698	$8,132
FOREIGN AFFAIRS	125,473	0	76	0	76	0	$189	0	$1,209	$0	$1,398	$6,534	$0	$6,534	$7,932
JOURNAL OF COUNSELING & DEV	118,011	0	71	0	71	0	$178	0	$1,137	$0	$1,315	$6,145	$0	$6,145	$7,460
FARM JOURNAL	105,741	0	64	0	64	0	$159	0	$1,019	$0	$1,178	$5,506	$0	$5,506	$6,685
SELECCIONES DEL READERS DIGEST	101,338	0	61	0	61	0	$153	0	$977	$0	$1,129	$5,277	$0	$5,277	$6,406
WRITER	94,183	0	57	0	57	0	$142	0	$908	$0	$1,050	$4,904	$0	$4,904	$5,954
SOCIAL WORK	82,765	0	50	0	50	0	$125	0	$798	$0	$922	$4,310	$0	$4,310	$5,232
QUARTERLY MUSIC MAGAZINE	70,837	0	43	0	43	0	$107	0	$683	$0	$789	$3,689	$0	$3,689	$4,478
CIVILIZATION	69,200	0	42	0	42	0	$104	0	$667	$0	$771	$3,603	$0	$3,603	$4,375
HISTORIC PRESERVATION	49,927	0	30	0	30	0	$75	0	$481	$0	$556	$2,600	$0	$2,600	$3,156
CHILDRENS MAGAZINE PROGRAM	45,403	0	27	0	27	0	$68	0	$438	$0	$506	$2,364	$0	$2,364	$2,870
BUENHOGAR	40,388	0	24	0	24	0	$61	0	$389	$0	$450	$2,103	$0	$2,103	$2,553
NATIONAL GEOGRAPHIC WORLD	33,536	0	20	0	20	0	$51	0	$323	$0	$374	$1,746	$0	$1,746	$2,120
CONTEMPORARY SOUNDTRACK	32,957	0	20	0	20	0	$50	0	$318	$0	$367	$1,716	$0	$1,716	$2,084
BESTE AUS READERS DIGEST	18,297	0	11	0	11	0	$28	0	$176	$0	$204	$953	$0	$953	$1,157
JOURNAL FRANCAIS D'AMERIQUE	15,772	0	10	0	10	0	$24	0	$152	$0	$176	$821	$0	$821	$997
MUSICAL MAINSTREAM	14,850	0	9	0	9	0	$22	0	$143	$0	$165	$773	$0	$773	$939
TOTAL MAGAZINES	14,005,317	0	8,437	0	8,437	0	$21,092	$0	$134,991	$0	$156,083	$729,305	$0	$729,305	$885,388
WEIGHTED AVERAGE PER ISSUE															
TALKING BOOK TOPICS-FD-IND, DISC															
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.															
TALKING BOOK TOPICS-FD-IND, ORD. FORM															
TALKING BOOK TOPICS-FD-IND															
TALKING BOOK TOPICS-FD-BULK															
TALKING BOOK TOPICS-FD	1,344,000	0	810	0	810	0	$2,024	0	$12,954	$0	$14,978	$69,987	$0	$69,987	$84,965
TALKING BOOK TOPICS-CASSETTE, CASS															
TALKING BOOK TOPICS-CASSETTE, PK./FM															
TALKING BOOK TOPICS-CASSETTE	0	2,400,000	0	1,644	0	2,466	$0	$6,164	$0	$26,301	$32,466	$0	$129,315	$129,315	$161,781
TALKING BOOK TOPICS-TOTAL	1,344,000	2,400,000	810	1,644	810	2,466	$2,024	$6,164	$12,954	$26,301	$47,444	$69,987	$129,315	$199,302	$246,746
GRAND TOTAL	15,349,317	2,400,000	9,247	1,644	9,247	2,466	$23,116	$6,164	$147,945	$26,301	$203,527	$799,291	$129,315	$928,606	$1,132,134

* Estimation of unit consumption and cost rates based upon best data available

Appendix 3-9

CURRENT USPS COSTS FOR MAGAZINE PROGRAM

1 MAGAZINE TITLE	2 Issues per Year	3 Average Copies Per Issue	4 Average Discs Per Copy	5 USPS Packages Delivered Per Year	6 USPS Packages Returned Per Year	7 USPS Average Package Weight(oz)	8 USPS 1st Class Delivery Price Per Package	9 Current USPS Delivery Cost Per Year	10 Current USPS Return Cost Per Year	11 Current USPS Total Cost Per Year
US NEWS AND WORLD REPORT	50	12,500	2	625,000	12,134	2.26	$0.78	$487,500	$9,465	$496,965
SPORTS ILLUSTRATED	53	5,832	2	309,096	6,001	2.26	$0.78	$241,095	$4,681	$245,776
GOOD HOUSEKEEPING	12	13,758	5	165,096	3,205	3.10	$1.01	$166,747	$3,237	$169,984
NATIONAL GEOGRAPHIC	12	14,648	2	175,776	3,413	2.26	$0.78	$137,105	$2,662	$139,767
NEW YORK TIMES	52	4,515	1	234,780	4,558	1.97	$0.55	$129,129	$2,507	$131,636
CONSUMER REPORTS	12	8,224	5	98,688	1,916	3.10	$1.01	$99,675	$1,935	$101,610
ELLERY QUEENS MYSTERY MAGAZINE	13	9,401	4	122,213	2,373	2.82	$0.78	$95,326	$1,851	$97,177
PREVENTION	12	10,125	2	121,500	2,359	2.26	$0.78	$94,770	$1,840	$96,610
MONEY	15	5,618	5	84,270	1,636	3.10	$1.01	$85,113	$1,652	$86,765
BOOK WORLD	52	1,674	2	87,048	1,690	2.26	$0.78	$67,897	$1,318	$69,216
KIPLINGER'S PERSONAL FINANCE MAGAZIN	12	6,414	4	76,968	1,494	2.82	$0.78	$60,035	$1,166	$61,201
NATION	47	1,394	2	65,518	1,272	2.26	$0.78	$51,104	$992	$52,096
MAGAZINE OF THE MONTH	12	5,314	3	63,768	1,238	2.54	$0.78	$49,739	$966	$50,705
TRUE WEST	12	5,157	2	61,884	1,201	2.26	$0.78	$48,270	$937	$49,207
NATIONAL REVIEW	25	2,454	3	61,350	1,191	2.54	$0.78	$47,853	$929	$48,782
ANALOG	13	3,074	5	39,962	776	3.10	$1.01	$40,362	$784	$41,145
ATLANTIC MONTHLY	12	3,664	3	43,968	854	2.54	$0.78	$34,295	$666	$34,961
AMERICAN HERITAGE	8	5,261	3	42,088	817	2.54	$0.78	$32,829	$637	$33,466
NATURAL HISTORY	12	3,469	3	41,628	808	2.54	$0.78	$32,470	$630	$33,100
OUTDOOR LIFE	12	3,407	4	40,884	794	2.82	$0.78	$31,890	$619	$32,509
NEW CHOICES	10	3,967	3	39,670	770	2.54	$0.78	$30,943	$601	$31,543
HARPERS	12	3,197	3	38,364	745	2.54	$0.78	$29,924	$581	$30,505
CHILDRENS MAGAZINE PROGRAM	12	3,153	2	37,836	735	2.26	$0.78	$29,512	$573	$30,085
EBONY	12	3,092	2	37,104	720	2.26	$0.78	$28,941	$562	$29,503
TRAVEL/HOLIDAY	10	3,223	3	32,230	626	2.54	$0.78	$25,139	$488	$25,627
ENCORE	12	1,828	5	21,936	426	3.10	$1.01	$22,155	$430	$22,586
QST	12	1,697	6	20,364	395	3.38	$1.01	$20,568	$399	$20,967
FARM JOURNAL	13	1,929	3	25,077	487	2.54	$0.78	$19,560	$380	$19,940
NATIONAL GEOGRAPHIC WORLD	12	2,842	1	34,104	662	1.97	$0.55	$18,757	$364	$19,121
STEREO REVIEW	12	1,972	4	23,664	459	2.82	$0.78	$18,458	$358	$18,816
WRITER	12	1,954	3	23,448	455	2.54	$0.78	$18,289	$355	$18,645
FOREIGN AFFAIRS	7	2,406	4	16,842	327	2.82	$0.78	$13,137	$255	$13,392
SELECCIONES DEL READERS DIGEST	12	1,131	4	13,572	264	2.82	$0.78	$10,586	$206	$10,792
CIVILIZATION	6	2,000	3	12,000	233	2.54	$0.78	$9,360	$182	$9,542
CONTEMPORARY SOUNDTRACK	6	1,862	2	11,172	217	2.26	$0.78	$8,714	$169	$8,883
JOURNAL OF COUNSELING & DEV.	6	1,390	8	8,340	162	3.95	$1.01	$8,423	$164	$8,587
HISTORIC PRESERVATION	6	1,704	3	10,224	198	2.54	$0.78	$7,975	$155	$8,130
QUARTERLY MUSIC MAGAZINE	4	2,542	4	10,168	197	2.82	$0.78	$7,931	$154	$8,085
SOCIAL WORK	6	1,239	6	7,434	144	3.38	$1.01	$7,508	$146	$7,654
BUENHOGAR	12	737	3	8,844	172	2.54	$0.78	$6,898	$134	$7,032
JOURNAL FRANCAIS D'AMERIQUE	23	296	2	6,808	132	2.26	$0.78	$5,310	$103	$5,413
MUSICAL MAINSTREAM	4	1,350	2	5,400	105	2.26	$0.78	$4,212	$82	$4,294
BESTE AUS READERS DIGEST	12	298	3	3,576	69	2.54	$0.78	$2,789	$54	$2,843
TOTAL MAGAZINES	681	171,712		3,009,662	58,433			$2,388,294	$46,369	$2,434,662
WEIGHTED AVERAGE PER ISSUE		4,419	2.7							
TALKING BOOK TOPICS-FD-IND, DISC	6	46,000	2							
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6	46,000	1							
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	46,000	1							
TALKING BOOK TOPICS-FD-IND	6	46,000		276,000	5,359					
TALKING BOOK TOPICS-FD-BULK	6	10,000	2	0	0					
TALKING BOOK TOPICS-FD	6	56,000		276,000	5,359	2.96	$0.78	$215,280	$4,180	$219,460
TALKING BOOK TOPICS-CASSETTE, CASS.	6	100,000	1							
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6	100,000	1							
TALKING BOOK TOPICS-CASSETTE	6	100,000		600,000	11,649	2.75	$0.78	$468,000	$9,086	$477,086
TALKING BOOK TOPICS-TOTAL	6	156,000		876,000	17,008			$683,280	$13,266	$696,546
GRAND TOTAL	687	327,712		3,885,662	75,440			$3,071,574	$59,635	$3,131,208

Costs based upon contract workload for FY96 and 1995 first-class rates.

Appendix 3-10

CURRENT ANNUAL ENVIRONMENTAL COSTS IN DESCENDING TOTAL COST ORDER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
MAGAZINE TITLE	Average Copies Per Year	Average Discs Per Copy	Duplication Average Discs Per Year	USPS Packages Returned Per Year	Discs or Cassettes Disposed	Disc or Cassette Envelopes Disposed	Disc Stiffeners Disposed	Disc or Cassette Forms Disposed	Disc Stiffeners Recycled	Cassettes Reused	Discs or Cassettes Unit Mass (Grams)	Disc or Cassette Envelopes Unit Mass (Grams)	Disc Stiffeners Unit Mass (Grams)	Disc or Cassette Forms Unit Mass (Grams)	Discs or Cassettes Disposed (TONS)	Disc or Cassette Envelopes Disposed (TONS)	Disc Stiffeners Disposed (TONS)	Disc or Cassette Forms Disposed (TONS)	Total Disposed (TONS)	$38/Ton Total Landfill Costs
US NEWS AND WORLD REPORT	625,000	2	1,250,000	12,134	1,250,000	625,000	612,866	0	12,134	0	8	14	34	0	11.01	9.64	22.95	0.00	43.60	$1,657
SPORTS ILLUSTRATED	309,096	2	618,192	6,001	618,192	309,096	303,095	0	6,001	0	8	14	34	0	5.45	4.77	11.35	0.00	21.56	$819
GOOD HOUSEKEEPING	165,096	5	825,480	3,205	825,480	165,096	161,891	0	3,205	0	8	14	34	0	7.27	2.55	6.06	0.00	15.88	$603
NEW YORK TIMES	234,780	1	234,780	4,558	234,780	234,780	230,222	0	4,558	0	8	14	34	0	2.07	3.62	8.62	0.00	14.31	$544
NATIONAL GEOGRAPHIC	175,776	2	351,552	3,413	351,552	175,776	172,363	0	3,413	0	8	14	34	0	3.10	2.71	6.45	0.00	12.26	$466
ELLERY QUEENS MYSTERY MAGAZINE	122,213	4	488,852	2,373	488,852	122,213	119,840	0	2,373	0	8	14	34	0	4.31	1.88	4.49	0.00	10.68	$406
CONSUMER REPORTS	98,688	5	493,440	1,916	493,440	98,688	96,772	0	1,916	0	8	14	34	0	4.35	1.52	3.62	0.00	9.49	$361
PREVENTION	121,500	2	243,000	2,359	243,000	121,500	119,141	0	2,359	0	8	14	34	0	2.14	1.87	4.46	0.00	8.48	$322
MONEY	84,270	5	421,350	1,636	421,350	84,270	82,634	0	1,636	0	8	14	34	0	3.71	1.30	3.09	0.00	8.11	$308
KIPLINGER'S PERSONAL FINANCE MAGAZIN	76,968	4	307,872	1,494	307,872	76,968	75,474	0	1,494	0	8	14	34	0	2.71	1.19	2.83	0.00	6.73	$256
BOOK WORLD	87,048	2	174,096	1,690	174,096	87,048	85,358	0	1,690	0	8	14	34	0	1.53	1.34	3.20	0.00	6.07	$231
MAGAZINE OF THE MONTH	63,768	3	191,304	1,238	191,304	63,768	62,530	0	1,238	0	8	14	34	0	1.69	0.98	2.34	0.00	5.01	$190
NATIONAL REVIEW	61,350	3	184,050	1,191	184,050	61,350	60,159	0	1,191	0	8	14	34	0	1.62	0.95	2.25	0.00	4.82	$183
NATION	65,518	2	131,036	1,272	131,036	65,518	64,246	0	1,272	0	8	14	34	0	1.15	1.01	2.41	0.00	4.57	$174
TRUE WEST	61,884	2	123,768	1,201	123,768	61,884	60,683	0	1,201	0	8	14	34	0	1.09	0.95	2.27	0.00	4.32	$164
ANALOG	39,962	5	199,810	776	199,810	39,962	39,186	0	776	0	8	14	34	0	1.76	0.62	1.47	0.00	3.84	$146
OUTDOOR LIFE	40,884	4	163,536	794	163,536	40,884	40,090	0	794	0	8	14	34	0	1.44	0.63	1.50	0.00	3.57	$136
ATLANTIC MONTHLY	43,968	3	131,904	854	131,904	43,968	43,114	0	854	0	8	14	34	0	1.16	0.68	1.61	0.00	3.45	$131
AMERICAN HERITAGE	42,088	3	126,264	817	126,264	42,088	41,271	0	817	0	8	14	34	0	1.11	0.65	1.55	0.00	3.31	$126
NATURAL HISTORY	41,628	3	124,884	808	124,884	41,628	40,820	0	808	0	8	14	34	0	1.10	0.64	1.53	0.00	3.27	$124
NEW CHOICES	39,670	3	119,010	770	119,010	39,670	38,900	0	770	0	8	14	34	0	1.05	0.61	1.46	0.00	3.12	$118
HARPERS	38,364	3	115,092	745	115,092	38,364	37,619	0	745	0	8	14	34	0	1.01	0.59	1.41	0.00	3.01	$115
CHILDRENS MAGAZINE PROGRAM	37,836	2	75,672	735	75,672	37,836	37,101	0	735	0	8	14	34	0	0.67	0.58	1.39	0.00	2.64	$100
EBONY	37,104	2	74,208	720	74,208	37,104	36,384	0	720	0	8	14	34	0	0.65	0.57	1.36	0.00	2.59	$98
TRAVEL/HOLIDAY	32,230	3	96,690	626	96,690	32,230	31,604	0	626	0	8	14	34	0	0.85	0.50	1.18	0.00	2.53	$96
QST	20,364	6	122,184	395	122,184	20,364	19,969	0	395	0	8	14	34	0	1.08	0.31	0.75	0.00	2.14	$81
ENCORE	21,936	5	109,680	426	109,680	21,936	21,510	0	426	0	8	14	34	0	0.97	0.34	0.81	0.00	2.11	$80
NATIONAL GEOGRAPHIC WORLD	34,104	1	34,104	662	34,104	34,104	33,442	0	662	0	8	14	34	0	0.30	0.53	1.25	0.00	2.08	$79
STEREO REVIEW	23,664	4	94,656	459	94,656	23,664	23,205	0	459	0	8	14	34	0	0.83	0.36	0.87	0.00	2.07	$79
FARM JOURNAL	25,077	3	75,231	487	75,231	25,077	24,590	0	487	0	8	14	34	0	0.66	0.39	0.92	0.00	1.97	$75
WRITER	23,448	3	70,344	455	70,344	23,448	22,993	0	455	0	8	14	34	0	0.62	0.36	0.86	0.00	1.84	$70
FOREIGN AFFAIRS	16,842	4	67,368	327	67,368	16,842	16,515	0	327	0	8	14	34	0	0.59	0.26	0.62	0.00	1.47	$56
SELECCIONES DEL READERS DIGEST	13,572	4	54,288	264	54,288	13,572	13,308	0	264	0	8	14	34	0	0.48	0.21	0.50	0.00	1.19	$45
JOURNAL OF COUNSELING & DEV	8,340	8	66,720	162	66,720	8,340	8,178	0	162	0	8	14	34	0	0.59	0.13	0.31	0.00	1.02	$39
CIVILIZATION	12,000	3	36,000	233	36,000	12,000	11,767	0	233	0	8	14	34	0	0.32	0.19	0.44	0.00	0.94	$36
QUARTERLY MUSIC MAGAZINE	10,168	4	40,672	197	40,672	10,168	9,971	0	197	0	8	14	34	0	0.36	0.16	0.37	0.00	0.89	$34
HISTORIC PRESERVATION	10,224	3	30,672	198	30,672	10,224	10,026	0	198	0	8	14	34	0	0.27	0.16	0.38	0.00	0.80	$31
SOCIAL WORK	7,434	6	44,604	144	44,604	7,434	7,290	0	144	0	8	14	34	0	0.39	0.11	0.27	0.00	0.78	$30
CONTEMPORARY SOUNDTRACK	11,172	2	22,344	217	22,344	11,172	10,955	0	217	0	8	14	34	0	0.20	0.17	0.41	0.00	0.78	$30
BUENHOGAR	8,844	3	26,532	172	26,532	8,844	8,672	0	172	0	8	14	34	0	0.23	0.14	0.32	0.00	0.69	$26
JOURNAL FRANCAIS D'AMERIQUE	6,808	2	13,616	132	13,616	6,808	6,676	0	132	0	8	14	34	0	0.12	0.10	0.25	0.00	0.47	$18
MUSICAL MAINSTREAM	5,400	2	10,800	105	10,800	5,400	5,295	0	105	0	8	14	34	0	0.10	0.08	0.20	0.00	0.38	$14
BESTE AUS READERS DIGEST	3,576	3	10,728	69	10,728	3,576	3,507	0	69	0	8	14	34	0	0.09	0.06	0.13	0.00	0.28	$11
TOTAL MAGAZINES	3,009,662		8,196,385	58,433	8,196,385	3,009,662	2,951,229	0	58,433	0					72.21	46.40	110.51	0.00	229.13	$8,707
WEIGHTED AVERAGE PER ISSUE		2.7																		
TALKING BOOK TOPICS-FD-IND, DISC	276,000	2	552,000		552,000						8				4.86				4.86	$185
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	276,000	1				276,000	270,641		5,359			14	34			4.26	10.13		14.39	$547
TALKING BOOK TOPICS-FD-IND, ORD. FORM	276,000	1						276,000						20				6.08	6.08	$231
TALKING BOOK TOPICS-FD-IND	276,000		552,000	5,359	552,000	276,000	270,641	276,000	5,359	0					4.86	4.26	10.13	6.08	25.33	$963
TALKING BOOK TOPICS-FD-BULK	60,000	2	120,000	0	120,000	0	0	0	0	0	8				1.06				1.06	$40
TALKING BOOK TOPICS-FD	336,000		672,000	5,359	672,000	276,000	270,641	276,000	5,359	0					5.92	4.26	10.13	6.08	26.39	$1,003
TALKING BOOK TOPICS-CASSETTE, CASS.	600,000	1	600,000		588,351					11,649	27				17.50				17.50	$665
TALKING BOOK TOPICS-CASSETTE, PK./FM	600,000	1				600,000		600,000				31		20		20.48		13.22	33.70	$1,281
TALKING BOOK TOPICS-CASSETTE	600,000		600,000	11,649	588,351	600,000	0	600,000	0	11,649					17.50	20.48	0.00	13.22	51.20	$1,946
TALKING BOOK TOPICS-TOTAL	936,000		1,272,000	17,008	1,260,351	876,000	270,641	876,000	5,359	11,649					23.42	24.74	10.13	19.30	77.59	$2,948
GRAND TOTAL	3,945,662		9,468,385	75,440	9,456,736	3,885,662	3,221,871	876,000	63,791	11,649					95.63	71.14	120.64	19.30	306.71	$11,655

Costs based upon workload statistics for 12-mon. end 8/95.

Appendix 3-11

Associated Environmental Issues - Flexible Discs

Production and Specifications of Flexible Discs

As stated earlier, there are 43 magazine titles currently produced on flexible discs. The Talking Book Topics (TBT) program is produced on both flexible discs and audio cassettes, which accounts for additional flexible discs generated annually. Assessment of environmental costs begins with the quantification of the amount of end product generated from the current audio magazine program and the TBTs on flexible discs.

The total number of flexible discs produced annually from the magazine titles and TBTs on flexible discs is 8,868,385. The number of flexible discs mailed out per issue depends on the average minutes of narration for each magazine title. As can be found in this report, one flexible disc can accommodate up to 120 minutes of narration. The flexible disc(s) is then shipped in a white paper envelope measuring 9.75 inches by 9.25 inches. A chipboard (cardboard stiffener) is also inserted into the envelope to maintain the integrity of the flexible discs. The total number of envelopes and chipboards needed for shipment of all flexible discs to patrons is 3,285,662. See Exhibit A.

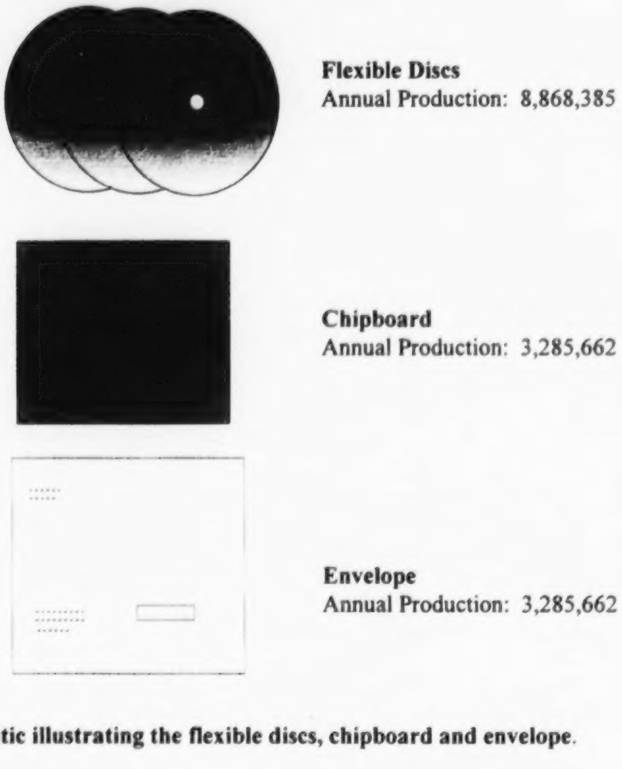

Flexible Discs
Annual Production: 8,868,385
Chipboard
Annual Production: 3,285,662
Envelope
Annual Production: 3,285,662

EXHIBIT A. Schematic illustrating the flexible discs, chipboard and envelope.

Laboratory analysis was performed to determine the physical properties (weight and measurements) of a flexible disc. Using a Denver weighing instrument, Model A-250, flexible discs were weighed individually and collectively to yield an accurate weight for the purposes of this study. For the practical use intended, each disc weighs 8 grams, and the dimensions are nine (9) inches in diameter and 0.159 millimeters thick. This data can be used in the determination of disposal costs.

Environmental Considerations Related to Flexible Discs and Packaging Disposal

The chipboard and white paper envelope are biodegradable. These products can degrade and be absorbed by the environment over time. They pose no adverse human health effects or environmental concerns when disposed of in a municipal landfill.

The flexible disc is not biodegradable and, therefore, will not decompose when disposed of into the environment. The constituents of the flexible disc, found on the Material Safety Data Sheet (MSDS), are introduced in Exhibit B.

Hazardous Ingredient/ Identity Information	**Approximate %**
PVC resin	80 - 95
MBS resin	2 - 15
Tin	0 - 1
Zinc stearate	0 - 1
Carbon black	0 - 2
Specific Gravity	1.3 - 1.4
Solubility	Insoluble

EXHIBIT B. Flexible disc composition and physical properties.

The specific gravity rating of 1.3 to 1.4 is an indication that the flexible disc will not float when submerged into water. The flexible disc will not dissolve in water. The MSDS does not list any human health hazard in relation to skin contact, inhalation or ingestion.

Key factors to support the disposal of flexible discs into municipal landfills are the inability of the flexible discs to decompose in the natural environment and the insolubility of the discs. This prevents any constituents from entering the soil and groundwater. The U.S. Environmental Protection Agency (EPA) has developed the Toxicity Characteristic Leaching Procedure (TCLP) to determine the potential of leachate from wastes that may pose threats to human health and the environment. The TCLP is designed to identify wastes that are likely to leach hazardous concentrations of toxic constituents into the surrounding soils or groundwater. No information was found to indicate the discs are toxic. Additionally, no adverse information was found to prohibit the land disposal of flexible discs into municipal landfills.

A 1991 court case, *United States v. New Castle County*, (Chem. Waste Lit. Rptr. 692, 769 F. Supp. 591; D. Del) revealed that PVC resin "does not depolymerize or decompose to form vinyl chloride under normal landfill conditions." Vinyl chloride is a known carcinogen as documented by the EPA. Recall from the MSDS that the flexible disc is composed of up to 95 % PVC resin.

Finally, under 40 CFR 261.4 (b) (1), household waste is classified as not hazardous. This falls under the assumption that the flexible disc, once received by the patron, becomes the property of that patron and that she or he can and does dispose of the flexible discs in their household trash. This assumption is based upon the fact that the NLS does not require the return of the flexible disc.

Recyclability of the Flexible Discs and Packaging

The flexible disc, chipboard and white paper envelope are all recyclable. The chipboard is a recycled material in itself, composed of corrugated cardboard and recycled paper. The white paper envelope can be recycled with white paper. The recycling possibilities for the flexible disc are discussed in the next paragraph.

The American Plastics Council (APC) maintains a database known as the 1995 Handlers/Reclaimers Database. This database records the names and addresses of companies that are potential recyclers of various types of plastics. Using the APC database for the eastern region of the United States, 31 potential recyclers of PVC records were found. Companies on the list were contacted randomly. The companies expressing interest and ability to recycle the flexible discs were then sent samples.

The recyclers that were sent samples generally expressed the same method of recycling the material. The company would sell the material in bulk quantities to offshore companies, predominantly third world. Also noteworthy is that the potential recyclers are willing to possibly purchase and transport the material in bulk provided that all of the yearly quantities would be guaranteed.

Evatone in Clearwater, Florida has developed usages for the tailings generated in the production of the flexible discs. The tailings are either sold to Djakarta, Indonesia or burned at the Pinellas County Energy Plant to elevate the BTUs for energy production. There are further environmental concerns raised with the issue of burning the flexible discs, such as air pollution, that are beyond the scope of this study but are important considerations.

Appendix 5-1

PRO FORMA DUPLICATION COSTS FOR MAGAZINE PROGRAM - BY PROSPECTIVE VENDOR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			400	400	400	400	400	400	400	400	400	400	400	400
MAGAZINE TITLE	**Current Duplication Cost Per Copy**	**Current Duplication Cost Per Year**	**VENDOR A Duplication Cost Per Copy**	**VENDOR A Duplication Cost Per Year**	**VENDOR A Average Discs Per Year**	**VENDOR A Duplication Cost Difference Disc-Cass.**	**VENDOR B Duplication Cost Per Copy**	**VENDOR B Duplication Cost Per Year**	**VENDOR B Average Discs Per Year**	**VENDOR B Duplication Cost Difference Disc-Cass.**	**VENDOR C Duplication Cost Per Copy**	**VENDOR C Duplication Cost Per Year**	**VENDOR C Average Discs Per Year**	**VENDOR C Duplication Cost Difference Disc-Cass.**
BESTE AUS READERS DIGEST	$3.31	$11,820	$3.14	$11,231	CASS	$589	$1.05	$3,757	CASS	$8,063	$2.69	$9,614	CASS	$2,206
JOURNAL OF COUNSELING & DEV.	$2.58	$21,517	$2.58	$21,542	DISC	($25)	$2.13	$17,730	CASS	$3,787	$2.84	$23,717	DISC	($2,200)
JOURNAL FRANCAIS D'AMERIQUE	$2.43	$16,556	$1.89	$12,862	CASS	$3,693	$0.94	$6,392	CASS	$10,164	$1.79	$12,190	CASS	$4,365
QST	$1.78	$36,313	$1.52	$30,890	CASS	$5,423	$1.57	$31,903	CASS	$4,410	$1.56	$31,742	CASS	$4,571
BUENHOGAR	$1.63	$14,428	$1.57	$13,881	CASS	$547	$0.90	$7,946	CASS	$6,482	$1.41	$12,497	CASS	$1,931
SELECCIONES DEL READERS DIGEST	$1.58	$21,422	$1.64	$22,272	DISC	($849)	$1.42	$19,282	CASS	$2,140	$1.84	$25,038	DISC	($3,616)
ENCORE	$1.52	$33,376	$1.41	$30,946	CASS	$2,430	$1.45	$31,793	CASS	$1,582	$1.52	$33,294	CASS	$82
ANALOG	$1.21	$48,294	$1.24	$49,508	DISC	($1,214)	$1.47	$58,556	DISC	($10,261)	$1.28	$51,253	DISC	($2,959)
STEREO REVIEW	$1.17	$27,800	$0.96	$22,673	CASS	$5,127	$0.92	$21,820	CASS	$5,980	$0.87	$20,610	CASS	$7,191
QUARTERLY MUSIC MAGAZINE	$1.15	$11,669	$1.83	$18,592	DISC	($6,923)	$1.37	$13,917	DISC	($2,248)	$2.00	$20,338	DISC	($8,669)
HISTORIC PRESERVATION	$1.10	$11,208	$1.41	$14,443	DISC	($3,235)	$0.86	$8,806	CASS	$2,402	$1.25	$12,812	DISC	($1,605)
SOCIAL WORK	$1.05	$7,837	$2.27	$16,902	DISC	($9,065)	$1.56	$11,626	DISC	($3,789)	$2.42	$17,974	DISC	($10,138)
FOREIGN AFFAIRS	$1.02	$17,253	$1.50	$25,187	DISC	($7,934)	$1.39	$23,404	DISC	($6,151)	$1.63	$27,428	DISC	($10,175)
MONEY	$1.00	$83,933	$1.10	$92,400	DISC	($8,467)	$1.42	$120,062	DISC	($36,129)	$1.13	$95,320	DISC	($11,387)
FARM JOURNAL	$0.93	$23,427	$0.88	$22,015	CASS	$1,412	$0.83	$20,811	CASS	$2,616	$0.86	$21,457	CASS	$1,970
CIVILIZATION	$0.93	$11,160	$1.30	$15,642	DISC	($4,482)	$0.89	$10,696	CASS	$464	$1.15	$13,785	DISC	($2,625)
WRITER	$0.93	$21,757	$0.90	$21,035	CASS	$722	$0.82	$19,259	CASS	$2,498	$0.87	$20,492	CASS	$1,266
CONSUMER REPORTS	$0.92	$90,793	$1.06	$105,029	DISC	($14,236)	$1.40	$137,982	DISC	($47,189)	$1.10	$109,048	DISC	($18,255)
OUTDOOR LIFE	$0.92	$37,433	$0.78	$32,000	CASS	$5,433	$0.89	$36,553	CASS	$880	$0.73	$30,036	CASS	$7,397
GOOD HOUSEKEEPING	$0.85	$140,662	$1.05	$174,111	DISC	($33,450)	$1.44	$237,646	DISC	($96,984)	$1.06	$174,592	DISC	($33,931)
NATIONAL REVIEW	$0.84	$51,626	$0.69	$42,119	CASS	$9,507	$0.86	$52,619	DISC	($993)	$0.69	$42,193	CASS	$9,433
NATURAL HISTORY	$0.83	$34,343	$0.71	$29,631	CASS	$4,712	$0.79	$32,858	CASS	$1,485	$0.73	$30,443	CASS	$3,900
MUSICAL MAINSTREAM	$0.82	$4,452	$2.14	$11,556	DISC	($7,104)	$0.79	$4,239	CASS	$213	$1.86	$10,025	DISC	($5,573)
NATION	$0.81	$53,043	$0.63	$41,453	CASS	$11,590	$0.79	$51,732	CASS	$1,312	$0.70	$46,090	CASS	$6,954
KIPLINGER'S PERSONAL FINANCE MAGAZINE	$0.80	$61,882	$0.69	$53,122	CASS	$8,760	$0.91	$69,890	DISC	($8,007)	$0.65	$49,789	CASS	$12,094
HARPERS	$0.76	$29,268	$0.77	$29,479	DISC	($211)	$0.85	$32,591	DISC	($3,323)	$0.75	$28,657	CASS	$611
TRAVEL/HOLIDAY	$0.76	$24,540	$0.79	$25,447	DISC	($908)	$0.81	$26,224	DISC	($1,684)	$0.78	$25,152	DISC	($612)
ELLERY QUEENS MYSTERY MAGAZINE	$0.75	$91,122	$0.64	$78,261	CASS	$12,861	$0.90	$109,593	DISC	($18,471)	$0.61	$74,629	CASS	$16,493
BOOK WORLD	$0.74	$64,172	$0.58	$50,817	CASS	$13,355	$0.76	$66,587	DISC	($2,415)	$0.67	$58,242	CASS	$5,929
NEW CHOICES	$0.71	$28,289	$0.73	$28,977	DISC	($688)	$0.80	$31,807	DISC	($3,518)	$0.74	$29,225	DISC	($936)
ATLANTIC MONTHLY	$0.71	$31,037	$0.76	$33,482	DISC	($2,445)	$0.88	$38,896	DISC	($7,859)	$0.72	$31,724	DISC	($687)
CONTEMPORARY SOUNDTRACK	$0.70	$7,827	$1.29	$14,378	DISC	($6,551)	$0.78	$8,713	DISC	($886)	$1.19	$13,331	DISC	($5,504)
AMERICAN HERITAGE	$0.67	$28,308	$0.75	$31,462	DISC	($3,154)	$0.85	$35,703	DISC	($7,394)	$0.72	$30,402	DISC	($2,093)
MAGAZINE OF THE MONTH	$0.66	$41,991	$0.69	$43,773	DISC	($1,782)	$0.87	$55,159	DISC	($13,168)	$0.67	$42,563	DISC	($572)
US NEWS AND WORLD REPORT	$0.65	$405,625	$0.52	$322,080	CASS	$83,545	$0.79	$495,395	DISC	($89,770)	$0.56	$352,570	CASS	$53,055
CHILDRENS MAGAZINE PROGRAM	$0.57	$21,453	$0.67	$25,451	DISC	($3,998)	$0.69	$26,291	DISC	($4,838)	$0.75	$28,368	DISC	($6,915)
EBONY	$0.51	$18,901	$0.74	$27,315	DISC	($8,414)	$0.79	$29,197	DISC	($10,296)	$0.75	$27,967	DISC	($9,066)
TRUE WEST	$0.49	$30,385	$0.62	$38,327	DISC	($7,942)	$0.75	$46,633	DISC	($16,248)	$0.67	$41,532	DISC	($11,146)
SPORTS ILLUSTRATED	$0.48	$147,562	$0.51	$156,732	DISC	($9,169)	$0.76	$234,135	DISC	($86,573)	$0.58	$179,865	DISC	($32,302)
PREVENTION	$0.44	$53,727	$0.56	$68,131	DISC	($14,404)	$0.77	$93,752	DISC	($40,025)	$0.61	$74,165	DISC	($20,438)
NATIONAL GEOGRAPHIC WORLD	$0.38	$13,004	$0.69	$23,671	DISC	($10,667)	$0.69	$23,476	DISC	($10,472)	$0.77	$26,325	DISC	($13,321)
NATIONAL GEOGRAPHIC	$0.38	$66,584	$0.54	$94,845	DISC	($28,261)	$0.77	$135,995	DISC	($69,411)	$0.59	$103,876	DISC	($37,292)
NEW YORK TIMES	$0.33	$77,783	$0.49	$114,853	DISC	($37,071)	$0.72	$168,009	DISC	($90,226)	$0.59	$139,111	DISC	($61,328)
TOTAL MAGAZINES		$2,075,583		$2,138,524	DISC	($62,941)		$2,709,433	DISC	($633,851)		$2,249,480	DISC	($173,896)
WEIGHTED AVERAGE PER ISSUE														
				Cass Savings		$169,706		Cass Savings		$54,479		Cass Savings		$139,447
TALKING BOOK TOPICS-FD-IND, DISC	$0.29	$78,770		Cass. Losses		($232,647)		Cass. Losses		($688,330)		Cass. Losses		($313,345)
TALKING BOOK TOPICS-FD-IND, STIFR /ENV.	$0.06	$15,842												
TALKING BOOK TOPICS-FD-IND, ORD. FORM	$0.16	$45,043												
TALKING BOOK TOPICS-FD-IND	$0.51	$139,656												
TALKING BOOK TOPICS-FD-BULK	$0.29	$17,124												
TALKING BOOK TOPICS-FD		$156,780												
TALKING BOOK TOPICS-CASSETTE, CASS.	$0.45	$267,000	$0.45	$416,520										
TALKING BOOK TOPICS-CASSETTE, PK /FM.	$0.24	$142,800	$0.24	$208,488										
TALKING BOOK TOPICS-CASSETTE	$0.68	$409,800	$0.68	$625,008			$0.88							
TALKING BOOK TOPICS-TOTAL		$566,580		$625,008	DISC	($58,428)	$0.88	$823,680	DISC	($257,100)	$0.73	$683,280	DISC	($116,700)
GRAND TOTAL		$2,642,163		$2,763,532	DISC	($121,369)		$3,533,113	DISC	($890,951)		$2,932,760	DISC	($290,598)

Costs based upon current contract prices and pro forma vendor estimates.

Scenario: one-way, disposable 400 minute maximum load.

Appendix 5-2

PRO FORMA PLAYBACK MACHINE COSTS FOR MAGAZINE PROGRAM

1	2	3	4	5	6	7	8	9
		MTBF(HR)= 1,460	MTTR(HR)= 1.5	Paid Stf.= 10% Rate= $25	Avg.Cost= $16		New Cost= $236 Life(HRS)= 4,380	
MAGAZINE TITLE	Pro Forma CBM-Hours Per Year	Pro Forma CBM Repairs Per Year	Pro Forma CBM Labor Hours/Year	Pro Forma CBM Labor Cost/Year	Pro Forma CBM Parts Cost/Year	Pro Forma Machine Repair Cost/Year	Pro Forma CBM Depletion Per Year	Pro Forma Machine Cost/Year
US NEWS AND WORLD REPORT	2,500,000	1,712	2,568	$6,421	$27,397	$33,818	$134,703	$168,522
GOOD HOUSEKEEPING	1,524,386	1,044	1,566	$3,915	$16,706	$20,621	$82,136	$102,757
SPORTS ILLUSTRATED	922,136	632	947	$2,369	$10,106	$12,474	$49,686	$62,160
CONSUMER REPORTS	802,662	550	825	$2,062	$8,796	$10,858	$43,248	$54,106
ELLERY QUEENS MYSTERY MAGAZINE	798,458	547	820	$2,051	$8,750	$10,801	$43,022	$53,823
MONEY	733,149	502	753	$1,883	$8,035	$9,918	$39,503	$49,421
NATIONAL GEOGRAPHIC	624,005	427	641	$1,603	$6,838	$8,441	$33,622	$42,063
KIPLINGER'S PERSONAL FINANCE MAGAZIN	518,251	355	532	$1,331	$5,679	$7,011	$27,924	$34,935
NEW YORK TIMES	438,256	300	450	$1,126	$4,803	$5,928	$23,614	$29,542
PREVENTION	419,175	287	431	$1,077	$4,594	$5,670	$22,586	$28,256
ANALOG	378,307	259	389	$972	$4,146	$5,118	$20,384	$25,501
MAGAZINE OF THE MONTH	358,164	245	368	$920	$3,925	$4,845	$19,298	$24,143
NATIONAL REVIEW	311,863	214	320	$801	$3,418	$4,219	$16,804	$21,022
ATLANTIC MONTHLY	262,342	180	270	$674	$2,875	$3,549	$14,135	$17,684
OUTDOOR LIFE	252,118	173	259	$648	$2,763	$3,411	$13,584	$16,995
QST	235,204	161	242	$604	$2,578	$3,182	$12,673	$15,855
AMERICAN HERITAGE	218,858	150	225	$562	$2,398	$2,961	$11,792	$14,753
BOOK WORLD	216,169	148	222	$555	$2,369	$2,924	$11,647	$14,572
HARPERS	193,099	132	198	$496	$2,116	$2,612	$10,404	$13,017
ENCORE	191,209	131	196	$491	$2,095	$2,587	$10,303	$12,889
NATION	190,002	130	195	$488	$2,082	$2,570	$10,238	$12,808
TRUE WEST	176,369	121	181	$453	$1,933	$2,386	$9,503	$11,889
NEW CHOICES	156,697	107	161	$402	$1,717	$2,120	$8,443	$10,563
STEREO REVIEW	154,210	106	158	$396	$1,690	$2,086	$8,309	$10,395
NATURAL HISTORY	149,167	102	153	$383	$1,635	$2,018	$8,037	$10,055
TRAVEL/HOLIDAY	133,755	92	137	$344	$1,466	$1,809	$7,207	$9,016
EBONY	128,627	88	132	$330	$1,410	$1,740	$6,931	$8,671
FOREIGN AFFAIRS	125,473	86	129	$322	$1,375	$1,697	$6,761	$8,458
JOURNAL OF COUNSELING & DEV.	118,011	81	121	$303	$1,293	$1,596	$6,359	$7,955
FARM JOURNAL	105,741	72	109	$272	$1,159	$1,430	$5,697	$7,128
SELECCIONES DEL READERS DIGEST	101,338	69	104	$260	$1,111	$1,371	$5,460	$6,831
WRITER	94,183	65	97	$242	$1,032	$1,274	$5,075	$6,349
SOCIAL WORK	82,765	57	85	$213	$907	$1,120	$4,459	$5,579
QUARTERLY MUSIC MAGAZINE	70,837	49	73	$182	$776	$958	$3,817	$4,775
CIVILIZATION	69,200	47	71	$178	$758	$936	$3,729	$4,665
HISTORIC PRESERVATION	49,927	34	51	$128	$547	$675	$2,690	$3,366
CHILDRENS MAGAZINE PROGRAM	45,403	31	47	$117	$498	$614	$2,446	$3,061
BUENHOGAR	40,388	28	41	$104	$443	$546	$2,176	$2,722
NATIONAL GEOGRAPHIC WORLD	33,536	23	34	$86	$368	$454	$1,807	$2,261
CONTEMPORARY SOUNDTRACK	32,957	23	34	$85	$361	$446	$1,776	$2,222
BESTE AUS READERS DIGEST	18,297	13	19	$47	$201	$248	$986	$1,233
JOURNAL FRANCAIS D'AMERIQUE	15,772	11	16	$41	$173	$213	$850	$1,063
MUSICAL MAINSTREAM	14,850	10	15	$38	$163	$201	$800	$1,001
TOTAL MAGAZINES	14,005,317	9,593	14,389	$35,973	$153,483	$189,455	$754,624	$944,080
WEIGHTED AVERAGE PER ISSUE								
TALKING BOOK TOPICS-FD-IND, DISC								
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.								
TALKING BOOK TOPICS-FD-IND, ORD. FORM								
TALKING BOOK TOPICS-FD-IND								
TALKING BOOK TOPICS-FD-BULK								
TALKING BOOK TOPICS-FD	1,344,000	921	1,381	$3,452	$14,729	$18,181	$72,416	$90,597
TALKING BOOK TOPICS-CASSETTE, CASS.								
TALKING BOOK TOPICS-CASSETTE, PK./FM.								
TALKING BOOK TOPICS-CASSETTE	2,400,000	1,644	2,466	$6,164	$26,301	$32,466	$129,315	$161,781
TALKING BOOK TOPICS-TOTAL	3,744,000	2,564	3,847	$9,616	$41,030	$50,647	$201,732	$252,378
GRAND TOTAL	17,749,317	12,157	18,236	$45,589	$194,513	$240,102	$956,356	$1,196,458
WEIGHTED AVERAGE PER ISSUE								

Estimation of unit consumption and cost rates based upon best data available.

Appendix 5-3

PRO FORMA USPS COSTS FOR MAGAZINE PROGRAM

1	2	3	4	5	6	7	8	9	10	11
						400	400	400	400	400
						Pro Forma	Pro Forma	Pro Forma	Pro Forma	Pro Forma
MAGAZINE TITLE	Issues per Year	Average Copies Per Issue	Number of 400-Min. Cassettes Per Copy	USPS Packages Delivered Per Year	USPS Packages Returned Per Year	USPS Average Package Weight(oz)	USPS 1st Class Delivery Price Per Package	USPS Delivery Cost Per Year	USPS Return Cost Per Year	USPS Total Cost Per Year
US NEWS AND WORLD REPORT	50	12,500	1	625,000	12,134	1.16	$0.55	$343,750	$6,674	$350,424
SPORTS ILLUSTRATED	53	5,832	1	309,096	6,001	1.16	$0.55	$170,003	$3,301	$173,303
NEW YORK TIMES	52	4,515	1	234,780	4,558	1.16	$0.55	$129,129	$2,507	$131,636
GOOD HOUSEKEEPING	12	13,758	2	165,096	3,205	2.11	$0.78	$128,775	$2,500	$131,275
NATIONAL GEOGRAPHIC	12	14,648	1	175,776	3,413	1.16	$0.55	$96,677	$1,877	$98,554
CONSUMER REPORTS	12	8,224	2	98,688	1,916	2.11	$0.78	$76,977	$1,495	$78,471
ELLERY QUEENS MYSTERY MAGAZINE	13	9,401	1	122,213	2,373	1.16	$0.55	$67,217	$1,305	$68,522
PREVENTION	12	10,125	1	121,500	2,359	1.16	$0.55	$66,825	$1,297	$68,122
MONEY	15	5,618	2	84,270	1,636	2.11	$0.78	$65,731	$1,276	$67,007
BOOK WORLD	52	1,674	1	87,048	1,690	1.16	$0.55	$47,876	$930	$48,806
KIPLINGER'S PERSONAL FINANCE MAGAZIN	12	6,414	1	76,968	1,494	1.16	$0.55	$42,332	$822	$43,154
NATION	47	1,394	1	65,518	1,272	1.16	$0.55	$36,035	$700	$36,735
MAGAZINE OF THE MONTH	12	5,314	1	63,768	1,238	1.16	$0.55	$35,072	$681	$35,753
TRUE WEST	12	5,157	1	61,884	1,201	1.16	$0.55	$34,036	$661	$34,697
NATIONAL REVIEW	25	2,454	1	61,350	1,191	1.16	$0.55	$33,743	$655	$34,398
ANALOG	13	3,074	2	39,962	776	2.11	$0.78	$31,170	$605	$31,776
ATLANTIC MONTHLY	12	3,664	1	43,968	854	1.16	$0.55	$24,182	$470	$24,652
AMERICAN HERITAGE	8	5,261	1	42,088	817	1.16	$0.55	$23,148	$449	$23,598
NATURAL HISTORY	12	3,469	1	41,628	808	1.16	$0.55	$22,895	$445	$23,340
OUTDOOR LIFE	12	3,407	1	40,884	794	1.16	$0.55	$22,486	$437	$22,923
NEW CHOICES	10	3,967	1	39,670	770	1.16	$0.55	$21,819	$424	$22,242
HARPERS	12	3,197	1	38,364	745	1.16	$0.55	$21,100	$410	$21,510
CHILDRENS MAGAZINE PROGRAM	12	3,153	1	37,836	735	1.16	$0.55	$20,810	$404	$21,214
EBONY	12	3,092	1	37,104	720	1.16	$0.55	$20,407	$396	$20,803
NATIONAL GEOGRAPHIC WORLD	12	2,842	1	34,104	662	1.16	$0.55	$18,757	$364	$19,121
TRAVEL/HOLIDAY	10	3,223	1	32,230	626	1.16	$0.55	$17,727	$344	$18,071
ENCORE	12	1,828	2	21,936	426	2.11	$0.78	$17,110	$332	$17,442
QST	12	1,697	2	20,364	395	2.11	$0.78	$15,884	$308	$16,192
FARM JOURNAL	13	1,929	1	25,077	487	1.16	$0.55	$13,792	$268	$14,060
FOREIGN AFFAIRS	7	2,406	2	16,842	327	2.11	$0.78	$13,137	$255	$13,392
STEREO REVIEW	12	1,972	1	23,664	459	1.16	$0.55	$13,015	$253	$13,268
WRITER	12	1,954	1	23,448	455	1.16	$0.55	$12,896	$250	$13,147
SELECCIONES DEL READERS DIGEST	12	1,131	2	13,572	264	2.11	$0.78	$10,586	$206	$10,792
JOURNAL OF COUNSELING & DEV.	6	1,390	3	8,340	162	3.21	$1.01	$8,423	$164	$8,587
QUARTERLY MUSIC MAGAZINE	4	2,542	2	10,168	197	2.11	$0.78	$7,931	$154	$8,085
CIVILIZATION	6	2,000	1	12,000	233	1.16	$0.55	$6,600	$128	$6,728
CONTEMPORARY SOUNDTRACK	6	1,862	1	11,172	217	1.16	$0.55	$6,145	$119	$6,264
SOCIAL WORK	6	1,239	2	7,434	144	2.11	$0.78	$5,799	$113	$5,911
HISTORIC PRESERVATION	6	1,704	1	10,224	198	1.16	$0.55	$5,623	$109	$5,732
BUENHOGAR	12	737	1	8,844	172	1.16	$0.55	$4,864	$94	$4,959
JOURNAL FRANCAIS D'AMERIQUE	23	296	1	6,808	132	1.16	$0.55	$3,744	$73	$3,817
MUSICAL MAINSTREAM	4	1,350	1	5,400	105	1.16	$0.55	$2,970	$58	$3,028
BESTE AUS READERS DIGEST	12	298	1	3,576	69	1.16	$0.55	$1,967	$38	$2,005
TOTAL MAGAZINES	681	171,712		3,009,662	58,433			$1,769,167	$34,348	$1,803,515
WEIGHTED AVERAGE PER ISSUE		4,419	1.16							
TALKING BOOK TOPICS-FD-IND, DISC	6	46,000								
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	6	46,000								
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	46,000								
TALKING BOOK TOPICS-FD-IND	6	46,000		276,000	5,359					
TALKING BOOK TOPICS-FD-BULK	6	10,000		0	0					
TALKING BOOK TOPICS-FD	6	56,000		276,000	5,359					
TALKING BOOK TOPICS-CASSETTE, CASS.	6	100,000	1							
TALKING BOOK TOPICS-CASSETTE, PK./FM.	6	100,000	1							
TALKING BOOK TOPICS-CASSETTE	6	100,000	1	600,000	11,649					
TALKING BOOK TOPICS-TOTAL	6	156,000	1	876,000	17,008	2.75	$0.78	$683,280	$13,266	$696,546
GRAND TOTAL	687	327,712		3,885,662	75,440			$2,452,447	$47,614	$2,500,061

Costs based upon contract workload for FY96 and 1995 first-class rates.

Appendix 5-4

PRO FORMA USPS COSTS FOR MAGAZINE PROGRAM - REUSABLE CASSETTE SCENARIO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAGAZINE TITLE	Issues per Year	Average Copies Per Issue	Number of 400-Min. Cassettes Per Copy	USPS Packages Delivered Per Year	USPS Packages Returned Per Year	Pro Forma Reusable USPS Average Package Weight(oz)	Pro Forma Reusable 1st Class Delivery Price Per Package	Pro Forma Reusable USPS Delivery Cost Per Year	Pro Forma Reusable USPS Return* Cost Per Year	Pro Forma Reusable Patron-to-Mag. Manf. Packages Per Year	Pro Forma Reusable Patron-to-Mag. Manf. Package Weight(oz)	Pro Forma Reusable Patron-to-Mag. Manf. Price Per Package	Pro Forma Reusable Patron-to-Mag. Manf. Cost Per Year	Pro Forma Reusable USPS Total Cost Per Year
US NEWS AND WORLD REPORT	50	12,500	1	625,000	12,134	1.37	$0.55	$343,750	$6,674	490,293	1.37	$0.55	$269,661	$620,085
SPORTS ILLUSTRATED	53	5,832	1	309,096	6,001	1.37	$0.55	$170,003	$3,301	242,476	1.37	$0.55	$133,362	$306,665
GOOD HOUSEKEEPING	12	13,758	2	165,096	3,205	2.33	$0.78	$128,775	$2,500	129,513	2.33	$0.78	$101,020	$232,295
NEW YORK TIMES	52	4,515	1	234,780	4,558	1.37	$0.55	$129,129	$2,507	184,177	1.37	$0.55	$101,298	$232,934
CONSUMER REPORTS	12	8,224	2	98,688	1,916	2.33	$0.78	$76,977	$1,495	77,418	2.33	$0.78	$60,386	$138,857
NATIONAL GEOGRAPHIC	12	14,648	1	175,776	3,413	1.37	$0.55	$96,677	$1,877	137,891	1.37	$0.55	$75,840	$174,394
MONEY	15	5,618	2	84,270	1,636	2.33	$0.78	$65,731	$1,276	66,107	2.33	$0.78	$51,564	$118,570
ELLERY QUEENS MYSTERY MAGAZINE	13	9,401	1	122,213	2,373	1.37	$0.55	$67,217	$1,305	95,872	1.37	$0.55	$52,730	$121,252
PREVENTION	12	10,125	1	121,500	2,359	1.37	$0.55	$66,825	$1,297	95,313	1.37	$0.55	$52,422	$120,544
BOOK WORLD	52	1,674	1	87,048	1,690	1.37	$0.55	$47,876	$930	68,286	1.37	$0.55	$37,558	$86,363
KIPLINGER'S PERSONAL FINANCE MAGAZINE	12	6,414	1	76,968	1,494	1.37	$0.55	$42,332	$822	60,379	1.37	$0.55	$33,208	$76,363
ANALOG	13	3,074	2	39,962	776	2.33	$0.78	$31,170	$605	31,349	2.33	$0.78	$24,452	$56,228
NATION	47	1,394	1	65,518	1,272	1.37	$0.55	$36,035	$700	51,397	1.37	$0.55	$28,268	$65,003
MAGAZINE OF THE MONTH	12	5,314	1	63,768	1,238	1.37	$0.55	$35,072	$681	50,024	1.37	$0.55	$27,513	$63,267
TRUE WEST	12	5,157	1	61,884	1,201	1.37	$0.55	$34,036	$661	48,546	1.37	$0.55	$26,700	$61,397
NATIONAL REVIEW	25	2,454	1	61,350	1,191	1.37	$0.55	$33,743	$655	48,127	1.37	$0.55	$26,470	$60,868
ATLANTIC MONTHLY	12	3,664	1	43,968	854	1.37	$0.55	$24,182	$470	34,491	1.37	$0.55	$18,970	$43,622
AMERICAN HERITAGE	8	5,261	1	42,088	817	1.37	$0.55	$23,148	$449	33,017	1.37	$0.55	$18,159	$41,757
NATURAL HISTORY	12	3,469	1	41,628	808	1.37	$0.55	$22,895	$445	32,656	1.37	$0.55	$17,961	$41,301
OUTDOOR LIFE	12	3,407	1	40,884	794	1.37	$0.55	$22,486	$437	32,072	1.37	$0.55	$17,640	$40,562
ENCORE	12	1,828	2	21,936	426	2.33	$0.78	$17,110	$332	17,208	2.33	$0.78	$13,422	$30,865
NEW CHOICES	10	3,967	1	39,670	770	1.37	$0.55	$21,819	$424	31,120	1.37	$0.55	$17,116	$39,358
HARPERS	12	3,197	1	38,364	745	1.37	$0.55	$21,100	$410	30,095	1.37	$0.55	$16,552	$38,062
CHILDRENS MAGAZINE PROGRAM	12	3,153	1	37,836	735	1.37	$0.55	$20,810	$404	29,681	1.37	$0.55	$16,325	$37,538
EBONY	12	3,092	1	37,104	720	1.37	$0.55	$20,407	$396	29,107	1.37	$0.55	$16,009	$36,812
QST	12	1,697	2	20,364	395	2.33	$0.78	$15,884	$308	15,975	2.33	$0.78	$12,460	$28,653
NATIONAL GEOGRAPHIC WORLD	12	2,842	1	34,104	662	1.37	$0.55	$18,757	$364	26,753	1.37	$0.55	$14,714	$33,836
TRAVEL/HOLIDAY	10	3,223	1	32,230	626	1.37	$0.55	$17,727	$344	25,283	1.37	$0.55	$13,906	$31,977
FOREIGN AFFAIRS	7	2,406	2	16,842	327	2.33	$0.78	$13,137	$255	13,212	2.33	$0.78	$10,305	$23,697
FARM JOURNAL	13	1,929	1	25,077	487	1.37	$0.55	$13,792	$268	19,672	1.37	$0.55	$10,820	$24,880
SELECCIONES DEL READERS DIGEST	12	1,131	2	13,572	264	2.33	$0.78	$10,586	$206	10,647	2.33	$0.78	$8,305	$19,096
STEREO REVIEW	12	1,972	1	23,664	459	1.37	$0.55	$13,015	$253	18,564	1.37	$0.55	$10,210	$23,478
WRITER	12	1,954	1	23,448	455	1.37	$0.55	$12,896	$250	18,394	1.37	$0.55	$10,117	$23,264
JOURNAL OF COUNSELING & DEV.	6	1,390	3	8,340	162	3.42	$1.01	$8,423	$164	6,542	3.42	$1.01	$6,608	$15,195
QUARTERLY MUSIC MAGAZINE	4	2,542	2	10,168	197	2.33	$0.78	$7,931	$154	7,976	2.33	$0.78	$6,222	$14,307
SOCIAL WORK	6	1,239	2	7,434	144	2.33	$0.78	$5,799	$113	5,832	2.33	$0.78	$4,549	$10,460
CIVILIZATION	6	2,000	1	12,000	233	1.37	$0.55	$6,600	$128	9,414	1.37	$0.55	$5,177	$11,906
CONTEMPORARY SOUNDTRACK	6	1,862	1	11,172	217	1.37	$0.55	$6,145	$119	8,764	1.37	$0.55	$4,820	$11,084
HISTORIC PRESERVATION	6	1,704	1	10,224	198	1.37	$0.55	$5,623	$109	8,020	1.37	$0.55	$4,411	$10,144
BUENHOGAR	12	737	1	8,844	172	1.37	$0.55	$4,864	$94	6,938	1.37	$0.55	$3,816	$8,774
JOURNAL FRANCAIS D'AMERIQUE	23	296	1	6,808	132	1.37	$0.55	$3,744	$73	5,341	1.37	$0.55	$2,937	$6,754
MUSICAL MAINSTREAM	4	1,350	1	5,400	105	1.37	$0.55	$2,970	$58	4,236	1.37	$0.55	$2,330	$5,358
BESTE AUS READERS DIGEST	12	298	1	3,576	69	1.37	$0.55	$1,967	$38	2,805	1.37	$0.55	$1,543	$3,548
TOTAL MAGAZINES	681	171,712		3,009,662	58,433			$1,769,167	$34,348	2,360,984			$1,387,855	$3,191,370
WEIGHTED AVERAGE PER ISSUE		4,419	1.16											
TALKING BOOK TOPICS-FD-IND, DISC	6	46,000												
TALKING BOOK TOPICS-FD-IND, STIFR /ENV.	6	46,000												
TALKING BOOK TOPICS-FD-IND, ORD. FORM	6	46,000												
TALKING BOOK TOPICS-FD-IND	6	46,000		276,000	5,359									
TALKING BOOK TOPICS-FD-BULK	6	10,000		0	0									
TALKING BOOK TOPICS-FD	6	56,000		276,000	5,359									
TALKING BOOK TOPICS-CASSETTE, CASS	6	100,000	1											
TALKING BOOK TOPICS-CASSETTE, PK /FM	6	100,000	1											
TALKING BOOK TOPICS-CASSETTE	6	100,000	1	600,000	11,649	2.96	$0.78	$468,000	$9,086	470,681	2.26	$0.78	$367,131	$844,217
TALKING BOOK TOPICS-TOTAL	6	156,000	1	876,000	17,008			$468,000	$9,086	470,681			$367,131	$844,217
GRAND TOTAL	687	327,712		3,885,662	75,440			$2,237,167	$43,435	2,831,664			$1,754,986	$4,035,587

Costs based upon 1995 first-class postal rates.

* - Cassettes reused by a third party or bulk shipped to manufacturer.

Scenario: reusable/returnable, 400 minute standard load.

Appendix 5-5

ASSOCIATED ENVIRONMENTAL ISSUES - AUDIO CASSETTES

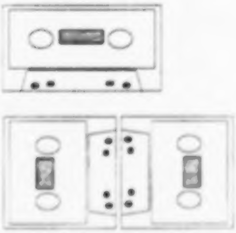
Production and Specifications of Audio Cassettes

As stated in this document, the transition to the alternative magazine scenario (audio cassettes) can be performed on three separate categories of cassettes. Each category varies by the number of minutes that can be recorded on an audio cassette, 360 minutes, 400 minutes or 440 minutes. In addition, for magazine titles that have less than 360 minutes of narration, the tape length can be cut to narration length. The transition to the audio cassette magazine program (including only the TBTs on flexible discs and not including current TBT cassette production) would generate a number of audio cassettes that would be produced annually for each cassette category. The total number of audio cassettes for each cassette category is shown is Exhibit A.

	360 MINUTES	400 MINUTES	440 MINUTES
TOTAL NUMBER OF CASSETTES PRODUCED ANNUALLY	4,063,519	3,840,674	3,791,752

EXHIBIT A. Total number of cassettes that would be produced annually due to the transition.

For the purposes of the environmental study, the 360 minute cassette scenario (yielding the highest number of cassettes annually) will be analyzed. Additionally, the current number of copies produced annually will remain the same. However, increases in readership are anticipated due to the transition to audio cassettes. The packaging to be used for mailing the audio cassette(s) will be a manila envelope. The manila envelope will carry either one or two cassettes. Exhibit B illustrates the cassettes and packaging. Note the arrangement of the two-cassette shipment. Experience has shown that placing the open sides of the cassettes together reduces damage to the cassettes.



Audio Cassettes (Single and Double Cassette Arrangement)
Annual Production: 4,663,519

Envelope Annual Production: 3,345,662

EXHIBIT B. Schematic illustrating the audio cassettes, packaging and quantities.

Laboratory analysis was performed to determine the physical properties (weight and measurements) of the audio cassette. Using a Denver weighing instrument, Model A-250, a 360 minute audio cassette sample was weighed to yield an accurate weight for the purposes of this study. For all practical applications of this study, each 360 minute cassette weighs 27 grams. This data can be used in the determination of disposal costs. Since landfills charge by weight and not by size, the measurements of the cassette will not be used for determining disposal costs.

Environmental Considerations Related To Cassette and Packaging Disposal

The Kraft envelope is biodegradable and can be absorbed by the environment over time. The manila envelope poses no adverse human health effects or environmental concerns when disposed of in a municipal landfill.

The audio cassette is a combination of various components, each of which is composed of different materials. According to manufacturers of the audio cassette, the only components that partially degrade are the polyurethane liner and the metal components. There is no Material Safety Data Sheet (MSDS) for the audio cassette itself. However, MSDSs do exist for some of the components of the cassette. Exhibit C illustrates the components of the 360 minute audio cassette.

A review of the MSDSs that were reasonably ascertainable gave insight to the composition of the components of the audio cassette. The polystyrene shell and window are not biodegradable. The MSDS classifies the polystyrene as being “inert and benign” with respect to environmental impact. Additionally, the MSDS states the only concern is with the pellets, which is the physical state of the polystyrene prior to shell manufacture, when under unusual circumstances, the pellets enter marine environments. No human health hazards were listed in relation to inhalation, skin absorption, or ingestion. The shells are insoluble and do not float when submerged in water.

The acetal hubs and rollers are not biodegradable. The MSDS states “all constituents are encapsulated within the polymer system, and therefore, present no likelihood of exposure under normal conditions of processing and handling.” No human health hazards were listed in relation to inhalation, skin absorption or ingestion. Additionally, the hubs and rollers are insoluble and do not float when submerged in water.

The polyurethane liners were said to be partially biodegradable, according to the cassette manufacturer. The MSDS classifies the liner to be nonhazardous under the criteria of the Occupational Safety and Health Act (OSHA) Communication Standard (29 CFR 1910.1200). For skin contact, the MSDS indicates “slight incidental contact is not expected to produce adverse effects.” Additionally, no adverse effects are expected due to inhalation or ingestion. The liner is insoluble and does not float when submerged in water.

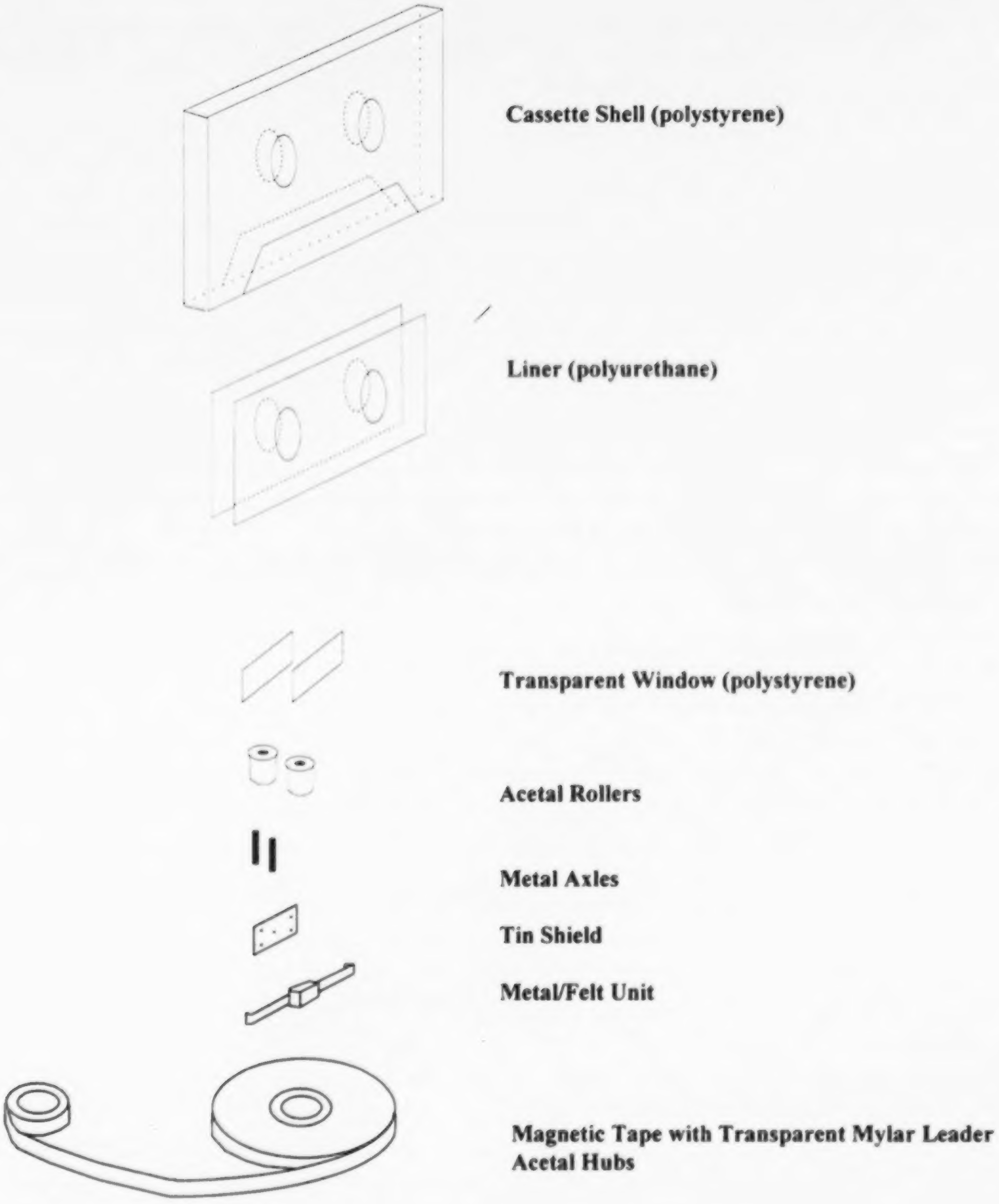

Cassette Shell (polystyrene)
Liner (polyurethane)
Transparent Window (polystyrene)
Acetal Rollers
Metal Axles
Tin Shield
Metal/Felt Unit
Magnetic Tape with Transparent Mylar Leader
Acetal Hubs

EXHIBIT C. The components of a typical 360 minute audio cassette.

The Mylar leader tape is not biodegradable. The leader tape is classified as stable and states no polymerization will occur under normal conditions. Under normal conditions, no adverse human health hazards were listed in relation to inhalation, skin absorption or ingestion. Solubility is classified as negligible.

The metal components of the cassette can possibly oxidize over time. The felt is inert and stable. No adverse human health effects or environmental impacts were found associated with landfill disposal of these components.

Key factors to support the disposal of audio cassettes into municipal landfills are the inability of the cassettes to decompose in the natural environment and the general insolubility of the cassettes. This prevents any constituents from entering the soil and groundwater. Additionally, no adverse information was found to prohibit the land disposal of audio cassettes into municipal landfills.

The cassette is considered stable. When the cassette is disposed of properly, it is unlikely the cassette will enter marine environments. The only possible human health concern found with the cassette is the physical size and not the composition of the components. If the cassette is taken apart, the internal parts are relatively small and if swallowed, could possibly cause choking. If the cassette remains intact, this eliminates the possible ingestion of the internal components.

As stated earlier, under 40 CFR 261.4 (b) (1), household waste is classified as not hazardous. This falls under the assumption that the audio cassette, once received by the patron, becomes the property of that patron and that she or he can and does dispose of the cassettes in household trash. This assumption is based upon the fact that the NLS does not require the return of the cassettes.

Recyclability and Reuse of the Audio Cassette and Corresponding Packaging

The audio cassette and the manila envelope are recyclable. The manila envelope can be recycled with like paper products. The recycling possibilities for audio cassette are discussed in the next paragraph.

The American Plastics Council (APC) maintains a database known as the 1995 Handlers/ Reclaimers Database. This database records the names and addresses of companies that are potential recyclers of various types of plastics. Using the APC database for the eastern region of the United States, 39 potential recyclers of audio cassettes were found. Companies on the list were contacted randomly. The companies expressing interest and ability to recycle the cassettes were then sent samples.

The recyclers that were sent samples revealed various methods of recycling the material. Some companies stated they would sell the material, after degaussing and delabeling, in bulk quantities to offshore companies predominantly in third world. Other companies expressed interest in the polystyrene shell only. In this case, the company would destroy the cassette, and landfill all components except the shell. The shell can be ground up (regrind) and used to manufacture other various plastic products that do not require virgin polystyrene. Also noteworthy is that the potential recyclers are willing to possibly purchase and transport the material in bulk provided that all of the yearly quantities would be guaranteed and there were central location points where the material could be picked up.

One final note should be introduced here. ManTech Environmental Technology, Incorporated (METI) contacted a specific cassette recycler, George VanLenten of International Plastics, located in Marston Mills, Massachusetts. Mr. VanLenten, who claims he has been in business for over twelve years and has recycled Sony cassettes in the past, expressed immediate interest in the cassettes and the ability to meet U.S. Government requirements to degauss and delabel. The current available supply of audio cassettes are published book titles and not magazines. METI met with James R. Kopp, Head, Logistics Section, The Library of Congress to discuss the recycling issue. International Plastics informed METI that they have and were hopefully going to continue picking up shipments of cassettes from York, Pennsylvania (a central facility where excess cassette book mailing containers and cassettes are shipped). If the transition from flexible discs to audio cassettes occurs, all of the of audio cassettes could be recycled by International Plastics, provided that they can be economically accumulated in York, Pennsylvania. International Plastics would accept the cassettes free and transport them from York, Pennsylvania to their facility at no charge.

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ACKNOWLEDGMENTS

The American Plastics Council
National Recycling Coalition
Environmental Protection Agency

Appendix 5-6

PRO FORMA ENVIRONMENTAL COSTS FOR MAGAZINE PROGRAM

1	2	3	4	5	6	7	8	9	10	11	12	13
				400	400	400	400	400	400	400	400	400
MAGAZINE TITLE	Average Copies Per Year	Number of 400-Min. Cassettes Per Copy	USPS Packages Returned Per Year	Pro Forma Cassettes Reused*	Pro Forma Cassette(s) Mass/Copy (Grams)	Pro Forma Cassette Envelope Mass/Copy (Grams)	Pro Forma Cassette Forms Unit Mass (Grams)	Pro Forma Cassettes Disposed (TONS)	Pro Forma Envelopes Disposed (TONS)	Pro Forma Cassette Forms Disposed (TONS)	Pro Forma Total Disposed (TONS)	Pro Forma $38 Total Landfill Costs
US NEWS AND WORLD REPORT	625,000	1	12,134	12,134	27	6	0	18.22	4.13	0.00	22.35	$849
SPORTS ILLUSTRATED	309,096	1	6,001	6,001	27	6	0	9.01	2.04	0.00	11.06	$420
GOOD HOUSEKEEPING	165,096	2	3,205	6,411	54	6	0	9.63	1.09	0.00	10.72	$407
NEW YORK TIMES	234,780	1	4,558	4,558	27	6	0	6.85	1.55	0.00	8.40	$319
CONSUMER REPORTS	98,688	2	1,916	3,832	54	6	0	5.76	0.65	0.00	6.41	$243
NATIONAL GEOGRAPHIC	175,776	1	3,413	3,413	27	6	0	5.13	1.16	0.00	6.29	$239
MONEY	84,270	2	1,636	3,272	54	6	0	4.91	0.56	0.00	5.47	$208
ELLERY QUEENS MYSTERY MAGAZINE	122,213	1	2,373	2,373	27	6	0	3.56	0.81	0.00	4.37	$166
PREVENTION	121,500	1	2,359	2,359	27	6	0	3.54	0.80	0.00	4.35	$165
BOOK WORLD	87,048	1	1,690	1,690	27	6	0	2.54	0.58	0.00	3.11	$118
KIPLINGER'S PERSONAL FINANCE MAGAZIN	76,968	1	1,494	1,494	27	6	0	2.24	0.51	0.00	2.75	$105
ANALOG	39,962	2	776	1,552	54	6	0	2.33	0.26	0.00	2.59	$99
NATION	65,518	1	1,272	1,272	27	6	0	1.91	0.43	0.00	2.34	$89
MAGAZINE OF THE MONTH	63,768	1	1,238	1,238	27	6	0	1.86	0.42	0.00	2.28	$87
TRUE WEST	61,884	1	1,201	1,201	27	6	0	1.80	0.41	0.00	2.21	$84
NATIONAL REVIEW	61,350	1	1,191	1,191	27	6	0	1.79	0.41	0.00	2.19	$83
ATLANTIC MONTHLY	43,968	1	854	854	27	6	0	1.26	0.29	0.00	1.57	$60
AMERICAN HERITAGE	42,088	1	817	817	27	6	0	1.23	0.28	0.00	1.51	$57
NATURAL HISTORY	41,628	1	808	808	27	6	0	1.21	0.28	0.00	1.49	$57
OUTDOOR LIFE	40,884	1	794	794	27	6	0	1.19	0.27	0.00	1.46	$56
ENCORE	21,936	2	426	852	54	6	0	1.28	0.14	0.00	1.42	$54
NEW CHOICES	39,670	1	770	770	27	6	0	1.16	0.26	0.00	1.42	$54
HARPERS	38,364	1	745	745	27	6	0	1.12	0.25	0.00	1.37	$52
CHILDRENS MAGAZINE PROGRAM	37,836	1	735	735	27	6	0	1.10	0.25	0.00	1.35	$51
EBONY	37,104	1	720	720	27	6	0	1.08	0.25	0.00	1.33	$50
QST	20,364	2	395	791	54	6	0	1.19	0.13	0.00	1.32	$50
NATIONAL GEOGRAPHIC WORLD	34,104	1	662	662	27	6	0	0.99	0.23	0.00	1.22	$46
TRAVEL/HOLIDAY	32,230	1	626	626	27	6	0	0.94	0.21	0.00	1.15	$44
FOREIGN AFFAIRS	16,842	2	327	654	54	6	0	0.98	0.11	0.00	1.09	$42
FARM JOURNAL	25,077	1	487	487	27	6	0	0.73	0.17	0.00	0.90	$34
SELECCIONES DEL READERS DIGEST	13,572	2	264	527	54	6	0	0.79	0.09	0.00	0.88	$33
STEREO REVIEW	23,664	1	459	459	27	6	0	0.69	0.16	0.00	0.85	$32
WRITER	23,448	1	455	455	27	6	0	0.68	0.15	0.00	0.84	$32
JOURNAL OF COUNSELING & DEV.	8,340	3	162	486	81	10	0	0.73	0.09	0.00	0.82	$31
QUARTERLY MUSIC MAGAZINE	10,168	2	197	395	54	6	0	0.59	0.07	0.00	0.66	$25
SOCIAL WORK	7,434	2	144	289	54	6	0	0.43	0.05	0.00	0.48	$18
CIVILIZATION	12,000	1	233	233	27	6	0	0.35	0.08	0.00	0.43	$16
CONTEMPORARY SOUNDTRACK	11,172	1	217	217	27	6	0	0.33	0.07	0.00	0.40	$15
HISTORIC PRESERVATION	10,224	1	198	198	27	6	0	0.30	0.07	0.00	0.37	$14
BUENHOGAR	8,844	1	172	172	27	6	0	0.26	0.06	0.00	0.32	$12
JOURNAL FRANCAIS D'AMERIQUE	6,808	1	132	132	27	6	0	0.20	0.04	0.00	0.24	$9
MUSICAL MAINSTREAM	5,400	1	105	105	27	6	0	0.16	0.04	0.00	0.19	$7
BESTE AUS READERS DIGEST	3,576	1	69	69	27	6	0	0.10	0.02	0.00	0.13	$5
TOTAL MAGAZINES	3,009,662		58,433	68,043				102.19	19.92	0.00	122.11	$4,640
WEIGHTED AVERAGE PER ISSUE		1.16										
TALKING BOOK TOPICS-FD-IND, DISC	276,000											
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	276,000											
TALKING BOOK TOPICS-FD-IND, ORD. FORM	276,000											
TALKING BOOK TOPICS-FD-IND	276,000		5,359									
TALKING BOOK TOPICS-FD-BULK	60,000		0									
TALKING BOOK TOPICS-FD	336,000		5,359									
TALKING BOOK TOPICS-CASSETTE, CASS.	600,000	1										
TALKING BOOK TOPICS-CASSETTE, PK./FM.	600,000	1					20					
TALKING BOOK TOPICS-CASSETTE	600,000	1	11,649		27	31		27.33	29.91	19.30	76.53	$2,908
TALKING BOOK TOPICS-TOTAL	936,000	1	17,008	17,008	27	31	20	27.33	29.91	19.30	76.53	$2,908
GRAND TOTAL	3,945,662		75,440	85,051				129.52	49.83	19.30	198.64	$7,548

Costs based upon FY96 contract workload & 1995 national average landfill rates.

* - Cassettes reused by a third party.

BEST COPY AVAILABLE

Scenario: one-way, 400 minute maximum load.

Appendix 5-7

PRO FORMA ENVIRONMENTAL COSTS FOR MAGAZINE PROGRAM - REUSABLE CASSETTE SCENARIO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
				400	400	400			400	400	400	400	400	400
MAGAZINE TITLE	Average Copies Per Year	Number of 400-Min. Cassettes Per Copy	USPS Packages Returned Per Year	Pro Forma Cassettes Reused*	Pro Forma Cassette(s) Mass/Copy (Grams)	Pro Forma Cassette Envelope Mass/Copy (Grams)	Pro Forma Cassette Forms Unit Mass (Grams)	Pro Forma Reusable Card Unit Mass (Grams)	Reusable Pro Forma Cassettes Disposed (TONS)	Reusable Pro Forma Envelopes Disposed (TONS)	Reusable Pro Forma Forms Disposed (TONS)	Reusable Card Unit Mass (TONS)	Reusable Pro Forma Total Disposed (TONS)	Reusable $38 Total Landfill Costs
US NEWS AND WORLD REPORT	625,000	1	12,134	12,134	27	6	0	6	4.56	1.34	0.00	4.05	9.94	$378
SPORTS ILLUSTRATED	309,096	1	6,001	6,001	27	6	0	6	2.25	0.66	0.00	2.00	4.92	$187
GOOD HOUSEKEEPING	165,096	2	3,205	6,411	54	6	0	6	2.41	0.35	0.00	1.07	3.83	$146
NEW YORK TIMES	234,780	1	4,558	4,558	27	6	0	6	1.71	0.50	0.00	1.52	3.73	$142
CONSUMER REPORTS	98,688	2	1,916	3,832	54	6	0	6	1.44	0.21	0.00	0.64	2.29	$87
NATIONAL GEOGRAPHIC	175,776	1	3,413	3,413	27	6	0	6	1.28	0.38	0.00	1.14	2.80	$106
MONEY	84,270	2	1,636	3,272	54	6	0	6	1.23	0.18	0.00	0.55	1.95	$74
ELLERY QUEENS MYSTERY MAGAZINE	122,213	1	2,373	2,373	27	6	0	6	0.89	0.26	0.00	0.79	1.94	$74
PREVENTION	121,500	1	2,359	2,359	27	6	0	6	0.89	0.26	0.00	0.79	1.93	$73
BOOK WORLD	87,048	1	1,690	1,690	27	6	0	6	0.63	0.19	0.00	0.56	1.38	$53
KIPLINGER'S PERSONAL FINANCE MAGAZIN	76,968	1	1,494	1,494	27	6	0	6	0.56	0.16	0.00	0.50	1.22	$47
ANALOG	39,962	2	776	1,552	54	6	0	6	0.58	0.09	0.00	0.26	0.93	$35
NATION	65,518	1	1,272	1,272	27	6	0	6	0.48	0.14	0.00	0.42	1.04	$40
MAGAZINE OF THE MONTH	63,768	1	1,238	1,238	27	6	0	6	0.46	0.14	0.00	0.41	1.01	$39
TRUE WEST	61,884	1	1,201	1,201	27	6	0	6	0.45	0.13	0.00	0.40	0.98	$37
NATIONAL REVIEW	61,350	1	1,191	1,191	27	6	0	6	0.45	0.13	0.00	0.40	0.98	$37
ATLANTIC MONTHLY	43,968	1	854	854	27	6	0	6	0.32	0.09	0.00	0.28	0.70	$27
AMERICAN HERITAGE	42,088	1	817	817	27	6	0	6	0.31	0.09	0.00	0.27	0.67	$25
NATURAL HISTORY	41,628	1	808	808	27	6	0	6	0.30	0.09	0.00	0.27	0.66	$25
OUTDOOR LIFE	40,884	1	794	794	27	6	0	6	0.30	0.09	0.00	0.26	0.65	$25
ENCORE	21,936	2	426	852	54	6	0	6	0.32	0.05	0.00	0.14	0.51	$19
NEW CHOICES	39,670	1	770	770	27	6	0	6	0.29	0.08	0.00	0.26	0.63	$24
HARPERS	38,364	1	745	745	27	6	0	6	0.28	0.08	0.00	0.25	0.61	$23
CHILDRENS MAGAZINE PROGRAM	37,836	1	735	735	27	6	0	6	0.28	0.08	0.00	0.25	0.60	$23
EBONY	37,104	1	720	720	27	6	0	6	0.27	0.08	0.00	0.24	0.59	$22
QST	20,364	2	395	791	54	6	0	6	0.30	0.04	0.00	0.13	0.47	$18
NATIONAL GEOGRAPHIC WORLD	34,104	1	662	662	27	6	0	6	0.25	0.07	0.00	0.22	0.54	$21
TRAVEL/HOLIDAY	32,230	1	626	626	27	6	0	6	0.23	0.07	0.00	0.21	0.51	$19
FOREIGN AFFAIRS	16,842	2	327	654	54	6	0	6	0.25	0.04	0.00	0.11	0.39	$15
FARM JOURNAL	25,077	1	487	487	27	6	0	6	0.18	0.05	0.00	0.16	0.40	$15
SELECCIONES DEL READERS DIGEST	13,572	2	264	527	54	6	0	6	0.20	0.03	0.00	0.09	0.31	$12
STEREO REVIEW	23,664	1	459	459	27	6	0	6	0.17	0.05	0.00	0.15	0.38	$14
WRITER	23,448	1	455	455	27	6	0	6	0.17	0.05	0.00	0.15	0.37	$14
JOURNAL OF COUNSELING & DEV.	8,340	3	162	486	81	10	0	6	0.18	0.03	0.00	0.05	0.27	$10
QUARTERLY MUSIC MAGAZINE	10,168	2	197	395	54	6	0	6	0.15	0.02	0.00	0.07	0.24	$9
SOCIAL WORK	7,434	2	144	289	54	6	0	6	0.11	0.02	0.00	0.05	0.17	$7
CIVILIZATION	12,000	1	233	233	27	6	0	6	0.09	0.03	0.00	0.08	0.19	$7
CONTEMPORARY SOUNDTRACK	11,172	1	217	217	27	6	0	6	0.08	0.02	0.00	0.07	0.18	$7
HISTORIC PRESERVATION	10,224	1	198	198	27	6	0	6	0.07	0.02	0.00	0.07	0.16	$6
BUENHOGAR	8,844	1	172	172	27	6	0	6	0.06	0.02	0.00	0.06	0.14	$5
JOURNAL FRANCAIS D'AMERIQUE	6,808	1	132	132	27	6	0	6	0.05	0.01	0.00	0.04	0.11	$4
MUSICAL MAINSTREAM	5,400	1	105	105	27	6	0	6	0.04	0.01	0.00	0.03	0.09	$3
BESTE AUS READERS DIGEST	3,576	1	69	69	27	6	0	6	0.03	0.01	0.00	0.02	0.06	$2
TOTAL MAGAZINES	3,009,662		58,433	68,043					25.55	6.45	0.00	19.50	51.50	$1,957
WEIGHTED AVERAGE PER ISSUE		1.16												
TALKING BOOK TOPICS-FD-IND, DISC	276,000													
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.	276,000													
TALKING BOOK TOPICS-FD-IND, ORD. FORM	276,000													
TALKING BOOK TOPICS-FD-IND	276,000		5,359											
TALKING BOOK TOPICS-FD-BULK	60,000		0											
TALKING BOOK TOPICS-FD	336,000		5,359											
TALKING BOOK TOPICS-CASSETTE, CASS.	600,000	1												
TALKING BOOK TOPICS-CASSETTE, PK./FM.	600,000	1					20							
TALKING BOOK TOPICS-CASSETTE	600,000	1	11,649		27	31	20	6	6.83	6.63	12.96	3.89	30.31	$1,152
TALKING BOOK TOPICS-TOTAL	936,000	1	17,008	17,008					6.83	6.63	12.96	3.89	30.31	$1,152
GRAND TOTAL	3,945,662		75,440	85,051					32.38	13.08	12.96	23.39	81.80	$3,109

Costs based upon national averge landfill rate

* - Cassettes reused by a third party or bulk shipped to manufacturer.

Scenario: reusable/returnable, 400 minute standard load

Appendix 5-8

PRO FORMA DUPLICATION COSTS FOR MAGAZINE PROGRAM - WITH TITLE CONSOLIDATION (4)

1	6	7	8	12	13	14
	400	400	400	400	400	400
	CASSETTE ONLY, IND VENDOR			CASSETTE ONLY, AVERAGED		
MAGAZINE TITLE	Minimum Duplication Cost Per Year	Minimum Duplication Cost SOURCE	Minimum Duplication Cost SAVINGS	Duplication Cost Per Year	Duplication Cost SOURCE	Duplication Cost SAVINGS
US NEWS AND WORLD REPORT	$322,080	VENDOR A	$83,545	$390,015	CASSETTE	$15,610
BOOK WORLD/NEW YORK TIMES	$156,673	VENDOR A	$55,278	$186,162	CASSETTE	$25,789
SPORTS ILLUSTRATED	$156,732	VENDOR A	($9,169)	$190,244	CASSETTE	($42,681)
GOOD HOUSEKEEPING	$174,111	VENDOR A	($33,450)	$195,450	CASSETTE	($54,788)
ELLERY QUEENS MYSTERY MAGAZINE	$74,629	VENDOR C	$16,493	$87,494	CASSETTE	$3,628
CONSUMER REPORTS	$105,029	VENDOR A	($14,236)	$117,353	CASSETTE	($26,560)
MONEY	$92,400	VENDOR A	($8,467)	$102,594	CASSETTE	($18,661)
NATURAL HISTORY/TRUE WEST	$57,408	VENDOR C	$17,574	$66,343	CASSETTE	$8,640
NATIONAL GEOGRAPHIC	$94,845	VENDOR A	($28,261)	$111,572	CASSETTE	($44,988)
KIPLINGER'S PERSONAL FINANCE MAGAZIN	$49,789	VENDOR C	$12,094	$57,600	CASSETTE	$4,282
PREVENTION	$68,131	VENDOR A	($14,404)	$78,683	CASSETTE	($24,955)
NATION	$41,453	VENDOR A	$11,590	$46,425	CASSETTE	$6,618
NATIONAL REVIEW	$42,119	VENDOR A	$9,507	$45,644	CASSETTE	$5,982
ANALOG	$49,508	VENDOR A	($1,214)	$53,106	CASSETTE	($4,811)
SELECCIONES DEL READERS DIGEST/BUE	$41,395	VENDOR C	$6,184	$43,482	CASSETTE	$4,097
MAGAZINE OF THE MONTH	$42,563	VENDOR C	($572)	$47,165	CASSETTE	($5,174)
OUTDOOR LIFE	$30,036	VENDOR C	$7,397	$32,863	CASSETTE	$4,570
QST	$30,890	VENDOR A	$5,423	$31,512	CASSETTE	$4,801
ENCORE	$30,946	VENDOR A	$2,430	$32,011	CASSETTE	$1,365
CHILDRENS MAGAZINE PROGRAM/NGW	$35,144	VENDOR A	($2,716)	$38,574	CASSETTE	($6,146)
ATLANTIC MONTHLY	$31,724	VENDOR C	($687)	$34,701	CASSETTE	($3,664)
HARPERS	$28,657	VENDOR C	$611	$30,242	CASSETTE	($974)
AMERICAN HERITAGE	$30,402	VENDOR C	($2,093)	$32,522	CASSETTE	($4,214)
NEW CHOICES	$28,977	VENDOR A	($688)	$30,003	CASSETTE	($1,714)
STEREO REVIEW	$20,610	VENDOR C	$7,191	$21,701	CASSETTE	$6,099
TRAVEL/HOLIDAY	$25,152	VENDOR C	($612)	$25,608	CASSETTE	($1,068)
FARM JOURNAL	$20,811	VENDOR B	$2,616	$21,428	CASSETTE	$1,999
WRITER	$19,259	VENDOR B	$2,498	$20,262	CASSETTE	$1,495
JOURNAL OF COUNSELING & DEV.	$17,730	VENDOR B	$3,787	$20,996	CASSETTE	$521
EBONY	$27,315	VENDOR A	($8,414)	$28,159	CASSETTE	($9,259)
FOREIGN AFFAIRS	$23,404	VENDOR B	($6,151)	$25,340	CASSETTE	($8,087)
JOURNAL FRANCAIS D'AMERIQUE	$6,392	VENDOR B	$10,164	$10,481	CASSETTE	$6,074
BESTE AUS READERS DIGEST	$3,757	VENDOR B	$8,063	$8,201	CASSETTE	$3,620
QUARTERLY MUSIC MAGAZINE	$13,917	VENDOR B	($2,248)	$17,615	CASSETTE	($5,947)
HISTORIC PRESERVATION	$8,806	VENDOR B	$2,402	$12,020	CASSETTE	($813)
CIVILIZATION	$10,696	VENDOR B	$464	$13,374	CASSETTE	($2,214)
SOCIAL WORK	$11,626	VENDOR B	($3,789)	$15,501	CASSETTE	($7,664)
CONTEMPORARY SOUNDTRACK	$8,713	VENDOR B	($886)	$12,141	CASSETTE	($4,314)
MUSICAL MAINSTREAM	$4,239	VENDOR B	$213	$8,607	CASSETTE	($4,155)
TOTAL MAGAZINES	$2,038,065		$127,469	$2,343,194		($177,660)
WEIGHTED AVERAGE PER ISSUE						
TALKING BOOK TOPICS-FD-IND, DISC						
TALKING BOOK TOPICS-FD-IND, STIFR./ENV.						
TALKING BOOK TOPICS-FD-IND, ORD. FORM						
TALKING BOOK TOPICS-FD-IND						
TALKING BOOK TOPICS-FD-BULK						
TALKING BOOK TOPICS-FD						
TALKING BOOK TOPICS-CASSETTE, CASS.						
TALKING BOOK TOPICS-CASSETTE, PK./FM.						
TALKING BOOK TOPICS-CASSETTE						
TALKING BOOK TOPICS-TOTAL	$625,008	VENDOR A	($58,428)	$710,656	CASSETTE	($144,076)
GRAND TOTAL	$2,663,073		$69,041	$3,053,850		($321,736)

Costs based upon current contract prices and pro forma vendor estimates.

Scenario: one-way, disposable 400 minute maximum load.

Appendix 6-1

Analysis of Incremental Number of CBMs Required Upon Magazine Format Conversion

	FD Magazines Including TBT4			TBT4 Without FD Magazines			Difference			Number of Additional CBMs Needed
Regional Libraries in Sample	Total Subscribers	TBM Only Subscribers	Percent of Subscribers	Total Subscribers	TBM Only Subscribers	Percent of Subscribers	Total Subscribers	TBM Only Subscribers	Percent of Subscribers	
Connecticut	1,351	43	3.2%	46	9	19.6%	1,305	34	2.6%	
Iowa	2,113	238	11.3%	991	176	17.8%	1,122	62	5.5%	
Massachusetts	3,297	702	21.3%	2,214	500	22.6%	1,083	202	18.7%	
Michigan (Lansing)	2,819	186	6.6%	418	51	12.2%	2,401	135	5.6%	
New Jersey	1,334	169	12.7%	455	112	24.6%	879	57	6.5%	
Ohio (North)	2,479	233	9.4%	850	128	15.1%	1,629	105	6.4%	
Pennsylvania (East)	5,036	649	12.9%	605	289	47.8%	4,431	360	8.1%	
Pennsylvania (West)	2,623	400	15.2%	225	56	24.9%	2,398	344	14.3%	
Texas	2,991	153	5.1%	90	10	11.1%	2,901	143	4.9%	
Sample Total	24,043	2,773	11.5%	5,894	1,331	22.6%	18,149	1,442	7.9%	
National-Level(*)										
FD Magazines Only	26,433						26,433	2,818	10.7%	2,818
FD Mags. and TBT4	12,403						12,403	1,322	10.7%	1,322
FD Mags. and TBT3	12,703						12,703	0	0.0%	0
FD Mags. and TBT3 and TBT4	572						572	0	0.0%	0
TBT4 Only	20,572			20,572	4,759	23.1%				4,759
TBT3 and TBT4 Only	500			500	0	0.0%				0
National Total	73,183			21,072	4,759	22.6%	52,111	4,140	7.9%	8,899

* - Per CMLS as of August 18, 1995